

18327 US Sequence Listing as filed
SEQUENCE LISTING

<110> Warner-Lambert Co. LLC
 Baron, Scott
 Hidayetoglu, Debra
 Offord, James
 Su, Ti-Zhi

<120> ANIMALS AND CELLS CONTAINING A MUTATED alpha2/delta GENE

<130> PC18327A

<150> 60/462,634

<151> 2003-04-14

<150> 60/518,110

<151> 2003-11-07

<160> 42

<170> PatentIn version 3.1

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18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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<213> Mus musculus

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<212> PRT

<213> Mus musculus

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<212> PRT

<213> Mus musculus

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<212> DNA

<213> Mus musculus

18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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 <211> 3529
 <212> DNA
 <213> Mus musculus

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18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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 <213> Mus musculus

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18327 US Sequence Listing as filed

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<212> PRT
<213> Mus musculus

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18327 US Sequence Listing as filed

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Pro Lys Pro Ile Gly Val Gly Ile Pro Thr Ile Asn Leu Arg Lys Arg
530 535 540

Arg Pro Asn Val Gln Asn Pro Lys Ser Gln Glu Pro Val Thr Leu Asp
545 550 555 560

Phe Leu Asp Ala Glu Leu Glu Asn Glu Ile Lys Val Glu Ile Arg Asn
565 570 575

Lys Met Ile Asp Gly Glu Ser Gly Glu Lys Thr Phe Arg Thr Leu Val
580 585 590

Lys Ser Gln Asp Glu Arg Tyr Ile Asp Lys Gly Asn Arg Thr Tyr Thr
595 600 605

Trp Thr Pro Val Asn Gly Thr Asp Tyr Ser Leu Ala Leu Val Leu Pro
610 615 620

Thr Tyr Ser Phe Tyr Tyr Ile Lys Ala Lys Leu Glu Glu Thr Ile Thr
625 630 635 640

Gln Ala Arg Tyr Ser Glu Thr Leu Lys Pro Asp Asn Phe Glu Glu Ser
645 650 655

Gly Tyr Thr Phe Ile Ala Pro Arg Glu Tyr Cys Asn Asp Leu Lys Pro
660 665 670

Ser Asp Asn Asn Thr Glu Phe Leu Leu Asn Phe Asn Glu Phe Ile Asp
675 680 685

Arg Lys Thr Pro Asn Asn Pro Ser Cys Asn Thr Asp Leu Ile Asn Arg
690 695 700

Ile Leu Leu Asp Ala Gly Phe Thr Asn Glu Leu Val Gln Asn Tyr Trp
705 710 715 720

Ser Lys Gln Lys Asn Ile Lys Gly Val Lys Ala Arg Phe Val Val Thr
725 730 735

18327 US Sequence Listing as filed

Asp Gly Gly Ile Thr Arg Val Tyr Pro Lys Glu Ala Gly Glu Asn Trp
740 745 750

Gln Glu Asn Pro Glu Thr Tyr Glu Asp Ser Phe Tyr Lys Arg Ser Leu
755 760 765

Asp Asn Asp Asn Tyr Val Phe Thr Ala Pro Tyr Phe Asn Lys Ser Gly
770 775 780

Pro Gly Ala Tyr Glu Ser Gly Ile Met Val Ser Lys Ala Val Glu Leu
785 790 795 800

Tyr Ile Gln Gly Lys Leu Leu Lys Pro Ala Val Val Gly Ile Lys Ile
805 810 815

Asp Val Asn Ser Trp Ile Glu Asn Phe Thr Lys Thr Ser Ile Arg Asp
820 825 830

Pro Cys Ala Gly Pro Val Cys Asp Cys Lys Arg Asn Ser Asp Val Met
835 840 845

Asp Cys Val Ile Leu Asp Asp Gly Gly Phe Leu Leu Met Ala Asn His
850 855 860

Asp Asp Tyr Thr Asn Gln Ile Gly Arg Phe Phe Gly Glu Ile Asp Pro
865 870 875 880

Ser Met Met Arg His Leu Val Asn Ile Ser Leu Tyr Ala Phe Asn Lys
885 890 895

Ser Tyr Asp Tyr Gln Ser Val Cys Asp Pro Gly Ala Ala Pro Lys Gln
900 905 910

Gly Ala Gly His Arg Ser Ala Tyr Val Pro Ser Ile Ala Asp Ile Leu
915 920 925

Gln Ile Gly Trp Trp Ala Thr Ala Ala Ala Trp Ser Ile Leu Gln Gln
930 935 940

Leu Leu Leu Ser Leu Thr Phe Pro Arg Leu Leu Glu Ala Val Glu Met
945 950 955 960

Glu Glu Asp Asp Phe Thr Ala Ser Leu Ser Lys Gln Ser Cys Ile Thr
965 970 975

Glu Gln Thr Gln Tyr Phe Phe Lys Asn Asp Thr Lys Ser Phe Ser Gly
980 985 990

18327 US Sequence Listing as filed

Leu Leu Asp Cys Gly Asn Cys Ser Arg Ile Phe His Val Glu Lys Leu
995 1000 1005

Met Asn Thr Asn Leu Val Phe Ile Met Val Glu Ser Lys Gly Thr
1010 1015 1020

Cys Pro Cys Asp Thr Arg Leu Leu Met Gln Ala Glu Gln Thr Ser
1025 1030 1035

Asp Gly Pro Asp Pro Cys Asp Met Val Lys Gln Pro Arg Tyr Arg
1040 1045 1050

Lys Gly Pro Asp Val Cys Phe Asp Asn Asn Val Leu Glu Asp Tyr
1055 1060 1065

Thr Asp Cys Gly Gly Val Ser Gly Leu Asn Pro Ser Leu Trp Ser
1070 1075 1080

Ile Phe Gly Leu Gln Phe Ile Leu Leu Trp Leu Val Ser Gly Ser
1085 1090 1095

Arg His Tyr Leu Leu
1100

<210> 26
<211> 1091
<212> PRT
<213> Mus musculus

<400> 26

Met Ala Ala Gly Cys Leu Leu Ala Leu Thr Leu Thr Leu Phe Gln Ser
1 5 10 15

Gly Leu Ile Gly Pro Ser Ser Glu Glu Pro Phe Pro Ser Pro Val Thr
20 25 30

Ile Lys Ser Trp Val Asp Lys Met Gln Glu Asp Leu Val Thr Leu Ala
35 40 45

Lys Thr Ala Ser Gly Val Thr Gln Leu Ala Asp Ile Tyr Glu Lys Tyr
50 55 60

Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
65 70 75 80

Ile Ala Ala Arg Asp Ile Glu Lys Leu Leu Ser Asn Arg Ser Lys Ala
85 90 95

18327 US Sequence Listing as filed

Leu Val Arg Leu Ala Met Glu Ala Glu Lys Val Gln Ala Ala His Gln
100 105 110

Trp Arg Glu Asp Phe Ala Ser Asn Glu Val Val Tyr Tyr Asn Ala Lys
115 120 125

Asp Asp Leu Asp Pro Glu Arg Asn Glu Ser Glu Pro Gly Ser Gln Arg
130 135 140

Ile Lys Pro Val Phe Ile Glu Asp Ala Asn Phe Gly Arg Gln Ile Ser
145 150 155 160

Tyr Gln His Ala Ala Val His Ile Pro Thr Asp Ile Tyr Glu Gly Ser
165 170 175

Thr Ile Val Leu Asn Glu Leu Asn Trp Thr Ser Ala Leu Asp Glu Val
180 185 190

Phe Lys Arg Asn Arg Asp Glu Asp Pro Thr Leu Leu Trp Gln Val Phe
195 200 205

Gly Ser Ala Thr Gly Leu Ala Arg Tyr Tyr Pro Ala Ser Pro Trp Val
210 215 220

Asp Asn Ser Arg Thr Pro Asn Lys Ile Asp Leu Tyr Asp Val Arg Arg
225 230 235 240

Arg Pro Trp Tyr Ile Gln Gly Ala Ala Ser Pro Lys Asp Met Leu Ile
245 250 255

Leu Val Asp Val Ser Gly Ser Val Ser Gly Leu Thr Leu Lys Leu Ile
260 265 270

Arg Thr Ser Val Ser Glu Met Leu Glu Thr Leu Ser Asp Asp Asp Phe
275 280 285

Val Asn Val Ala Ser Phe Asn Ser Asn Ala Gln Asp Val Ser Cys Phe
290 295 300

Gln His Leu Val Gln Ala Asn Val Arg Asn Lys Lys Val Leu Lys Asp
305 310 315 320

Ala Val Asn Asn Ile Thr Ala Lys Gly Ile Thr Asp Tyr Lys Lys Gly
325 330 335

Phe Ser Phe Ala Phe Glu Gln Leu Leu Asn Tyr Asn Val Ser Arg Ala

18327 US Sequence Listing as filed

340

345

350

Asn Cys Asn Lys Ile Ile Met Leu Phe Thr Asp Gly Gly Glu Glu Arg
355 360 365

Ala Gln Glu Ile Phe Ala Lys Tyr Asn Lys Asp Lys Lys Val Arg Val
370 375 380

Phe Thr Phe Ser Val Gly Gln His Asn Tyr Asp Arg Gly Pro Ile Gln
385 390 395 400

Trp Met Ala Cys Glu Asn Lys Gly Tyr Tyr Tyr Glu Ile Pro Ser Ile
405 410 415

Gly Ala Ile Arg Ile Asn Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg
420 425 430

Pro Met Val Leu Ala Gly Asp Lys Ala Lys Gln Val Gln Trp Thr Asn
435 440 445

Val Tyr Leu Asp Ala Leu Glu Leu Gly Leu Val Ile Thr Gly Thr Leu
450 455 460

Pro Val Phe Asn Val Thr Gly Gln Ser Glu Asn Lys Thr Asn Leu Lys
465 470 475 480

Asn Gln Leu Ile Leu Gly Val Met Gly Val Asp Val Ser Leu Glu Asp
485 490 495

Ile Lys Arg Leu Thr Pro Arg Phe Thr Leu Cys Pro Asn Gly Tyr Tyr
500 505 510

Phe Ala Ile Asp Pro Asn Gly Tyr Val Leu Leu His Pro Asn Leu Gln
515 520 525

Pro Lys Asn Pro Lys Ser Gln Glu Pro Val Thr Leu Asp Phe Leu Asp
530 535 540

Ala Glu Leu Glu Asn Glu Ile Lys Val Glu Ile Arg Asn Lys Met Ile
545 550 555 560

Asp Gly Glu Ser Gly Glu Lys Thr Phe Arg Thr Leu Val Lys Ser Gln
565 570 575

Asp Glu Arg Tyr Ile Asp Lys Gly Asn Arg Thr Tyr Thr Trp Thr Pro
580 585 590

18327 US Sequence Listing as filed

Val Asn Gly Thr Asp Tyr Ser Leu Ala Leu Val Leu Pro Thr Tyr Ser
595 600 605

Phe Tyr Tyr Ile Lys Ala Lys Leu Glu Glu Thr Ile Thr Gln Ala Arg
610 615 620

Ser Lys Lys Gly Lys Met Lys Asp Ser Glu Thr Leu Lys Pro Asp Asn
625 630 635 640

Phe Glu Glu Ser Gly Tyr Thr Phe Ile Ala Pro Arg Glu Tyr Cys Asn
645 650 655

Asp Leu Lys Pro Ser Asp Asn Asn Thr Glu Phe Leu Leu Asn Phe Asn
660 665 670

Glu Phe Ile Asp Arg Lys Thr Pro Asn Asn Pro Ser Cys Asn Thr Asp
675 680 685

Leu Ile Asn Arg Ile Leu Leu Asp Ala Gly Phe Thr Asn Glu Leu Val
690 695 700

Gln Asn Tyr Trp Ser Lys Gln Lys Asn Ile Lys Gly Val Lys Ala Arg
705 710 715 720

Phe Val Val Thr Asp Gly Gly Ile Thr Arg Val Tyr Pro Lys Glu Ala
725 730 735

Gly Glu Asn Trp Gln Glu Asn Pro Glu Thr Tyr Glu Asp Ser Phe Tyr
740 745 750

Lys Arg Ser Leu Asp Asn Asp Asn Tyr Val Phe Thr Ala Pro Tyr Phe
755 760 765

Asn Lys Ser Gly Pro Gly Ala Tyr Glu Ser Gly Ile Met Val Ser Lys
770 775 780

Ala Val Glu Leu Tyr Ile Gln Gly Lys Leu Leu Lys Pro Ala Val Val
785 790 795 800

Gly Ile Lys Ile Asp Val Asn Ser Trp Ile Glu Asn Phe Thr Lys Thr
805 810 815

Ser Ile Arg Asp Pro Cys Ala Gly Pro Val Cys Asp Cys Lys Arg Asn
820 825 830

Ser Asp Val Met Asp Cys Val Ile Leu Asp Asp Gly Gly Phe Leu Leu
835 840 845

18327 US Sequence Listing as filed

Met Ala Asn His Asp Asp Tyr Thr Asn Gln Ile Gly Arg Phe Phe Gly
850 855 860

Glu Ile Asp Pro Ser Met Met Arg His Leu Val Asn Ile Ser Leu Tyr
865 870 875 880

Ala Phe Asn Lys Ser Tyr Asp Tyr Gln Ser Val Cys Asp Pro Gly Ala
885 890 895

Ala Pro Lys Gln Gly Ala Gly His Arg Ser Ala Tyr Val Pro Ser Ile
900 905 910

Ala Asp Ile Leu Gln Ile Gly Trp Trp Ala Thr Ala Ala Ala Trp Ser
915 920 925

Ile Leu Gln Gln Leu Leu Leu Ser Leu Thr Phe Pro Arg Leu Leu Glu
930 935 940

Ala Val Glu Met Glu Glu Asp Asp Phe Thr Ala Ser Leu Ser Lys Gln
945 950 955 960

Ser Cys Ile Thr Glu Gln Thr Gln Tyr Phe Phe Lys Asn Asp Thr Lys
965 970 975

Ser Phe Ser Gly Leu Leu Asp Cys Gly Asn Cys Ser Arg Ile Phe His
980 985 990

Val Glu Lys Leu Met Asn Thr Asn Leu Val Phe Ile Met Val Glu Ser
995 1000 1005

Lys Gly Thr Cys Pro Cys Asp Thr Arg Leu Leu Met Gln Ala Glu
1010 1015 1020

Gln Thr Ser Asp Gly Pro Asp Pro Cys Asp Met Val Lys Gln Pro
1025 1030 1035

Arg Tyr Arg Lys Gly Pro Asp Val Cys Phe Asp Asn Asn Val Leu
1040 1045 1050

Glu Asp Tyr Thr Asp Cys Gly Gly Val Ser Gly Leu Asn Pro Ser
1055 1060 1065

Leu Trp Ser Ile Phe Gly Leu Gln Phe Ile Leu Leu Trp Leu Val
1070 1075 1080

Ser Gly Ser Arg His Tyr Leu Leu
1085 1090

18327 US Sequence Listing as filed

<210> 27
 <211> 1086
 <212> PRT
 <213> Mus musculus

<400> 27

Met Ala Ala Gly Cys Leu Leu Ala Leu Thr Leu Thr Leu Phe Gln Ser
 1 5 10 15

Gly Leu Ile Gly Pro Ser Ser Glu Glu Pro Phe Pro Ser Pro Val Thr
 20 25 30

Ile Lys Ser Trp Val Asp Lys Met Gln Glu Asp Leu Val Thr Leu Ala
 35 40 45

Lys Thr Ala Ser Gly Val Thr Gln Leu Ala Asp Ile Tyr Glu Lys Tyr
 50 55 60

Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
 65 70 75 80

Ile Ala Ala Arg Asp Ile Glu Lys Leu Leu Ser Asn Arg Ser Lys Ala
 85 90 95

Leu Val Arg Leu Ala Met Glu Ala Glu Lys Val Gln Ala Ala His Gln
 100 105 110

Trp Arg Glu Asp Phe Ala Ser Asn Glu Val Val Tyr Tyr Asn Ala Lys
 115 120 125

Asp Asp Leu Asp Pro Glu Arg Asn Glu Ser Glu Pro Gly Ser Gln Arg
 130 135 140

Ile Lys Pro Val Phe Ile Glu Asp Ala Asn Phe Gly Arg Gln Ile Ser
 145 150 155 160

Tyr Gln His Ala Ala Val His Ile Pro Thr Asp Ile Tyr Glu Gly Ser
 165 170 175

Thr Ile Val Leu Asn Glu Leu Asn Trp Thr Ser Ala Leu Asp Glu Val
 180 185 190

Phe Lys Arg Asn Arg Asp Glu Asp Pro Thr Leu Leu Trp Gln Val Phe
 195 200 205

Gly Ser Ala Thr Gly Leu Ala Arg Tyr Tyr Pro Ala Ser Pro Trp Val
 210 215 220

18327 US Sequence Listing as filed

Asp Asn Ser Arg Thr Pro Asn Lys Ile Asp Leu Tyr Asp Val Arg Arg
 225 230 235 240
 Arg Pro Trp Tyr Ile Gln Gly Ala Ala Ser Pro Lys Asp Met Leu Ile
 245 250 255
 Leu Val Asp Val Ser Gly Ser Val Ser Gly Leu Thr Leu Lys Leu Ile
 260 265 270
 Arg Thr Ser Val Ser Glu Met Leu Glu Thr Leu Ser Asp Asp Asp Phe
 275 280 285
 Val Asn Val Ala Ser Phe Asn Ser Asn Ala Gln Asp Val Ser Cys Phe
 290 295 300
 Gln His Leu Val Gln Ala Asn Val Arg Asn Lys Lys Val Leu Lys Asp
 305 310 315 320
 Ala Val Asn Asn Ile Thr Ala Lys Gly Ile Thr Asp Tyr Lys Lys Gly
 325 330 335
 Phe Ser Phe Ala Phe Glu Gln Leu Leu Asn Tyr Asn Val Ser Arg Ala
 340 345 350
 Asn Cys Asn Lys Ile Ile Met Leu Phe Thr Asp Gly Gly Glu Glu Arg
 355 360 365
 Ala Gln Glu Ile Phe Ala Lys Tyr Asn Lys Asp Lys Lys Val Arg Val
 370 375 380
 Phe Thr Phe Ser Val Gly Gln His Asn Tyr Asp Arg Gly Pro Ile Gln
 385 390 395 400
 Trp Met Ala Cys Glu Asn Lys Gly Tyr Tyr Tyr Glu Ile Pro Ser Ile
 405 410 415
 Gly Ala Ile Arg Ile Asn Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg
 420 425 430
 Pro Met Val Leu Ala Gly Asp Lys Ala Lys Gln Val Gln Trp Thr Asn
 435 440 445
 Val Tyr Leu Asp Ala Leu Glu Leu Gly Leu Val Ile Thr Gly Thr Leu
 450 455 460
 Pro Val Phe Asn Val Thr Gly Gln Ser Glu Asn Lys Thr Asn Leu Lys
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18327 US Sequence_Listing as filed

Asn Gln Leu Ile Leu Gly Val Met Gly Val Asp Val Ser Leu Glu Asp
485 490 495

Phe Ala Ile Asp Pro Asn Gly Tyr Val Leu Leu His Pro Asn Leu Gln
515 520 525

Glu Ile Lys Val Glu Ile Arg Asn Lys Met Ile Asp Gly Glu Ser Gly
545 550 555 560

Asp Lys Gly Asn Arg Thr Tyr Thr Trp Thr Pro Val Asn Gly Thr Asp
580 585 590

Ala Lys Leu Glu Glu Thr Ile Thr Gln Ala Arg Ser Lys Lys Gly Lys
610 615 620

Tyr Thr Phe Ile Ala Pro Arg Glu Tyr Cys Asn Asp Leu Lys Pro Ser
645 650 655

Lys Thr Pro Asn Asn Pro Ser Cys Asn Thr Asp Leu Ile Asn Arg Ile
675 680 685

Lys Gln Lys Asn Ile Lys Gly Val Lys Ala Arg Phe Val Val Thr Asp
705 710 715 720

18327 US Sequence Listing as filed

Gly Gly Ile Thr Arg Val Tyr Pro Lys Glu Ala Gly Glu Asn Trp Gln
725 730 735

Glu Asn Pro Glu Thr Tyr Glu Asp Ser Phe Tyr Lys Arg Ser Leu Asp
740 745 750

Asn Asp Asn Tyr Val Phe Thr Ala Pro Tyr Phe Asn Lys Ser Gly Pro
755 760 765

Gly Ala Tyr Glu Ser Gly Ile Met Val Ser Lys Ala Val Glu Leu Tyr
770 775 780

Ile Gln Gly Lys Leu Leu Lys Pro Ala Val Val Gly Ile Lys Ile Asp
785 790 795 800

Val Asn Ser Trp Ile Glu Asn Phe Thr Lys Thr Ser Ile Arg Asp Pro
805 810 815

Cys Ala Gly Pro Val Cys Asp Cys Lys Arg Asn Ser Asp Val Met Asp
820 825 830

Cys Val Ile Leu Asp Asp Gly Gly Phe Leu Leu Met Ala Asn His Asp
835 840 845

Asp Tyr Thr Asn Gln Ile Gly Arg Phe Phe Gly Glu Ile Asp Pro Ser
850 855 860

Met Met Arg His Leu Val Asn Ile Ser Leu Tyr Ala Phe Asn Lys Ser
865 870 875 880

Tyr Asp Tyr Gln Ser Val Cys Asp Pro Gly Ala Ala Pro Lys Gln Gly
885 890 895

Ala Gly His Arg Ser Ala Tyr Val Pro Ser Ile Ala Asp Ile Leu Gln
900 905 910

Ile Gly Trp Trp Ala Thr Ala Ala Ala Trp Ser Ile Leu Gln Gln Leu
915 920 925

Leu Leu Ser Leu Thr Phe Pro Arg Leu Leu Glu Ala Val Glu Met Glu
930 935 940

Glu Asp Asp Phe Thr Ala Ser Leu Ser Lys Gln Ser Cys Ile Thr Glu
945 950 955 960

Gln Thr Gln Tyr Phe Phe Lys Asn Asp Thr Lys Ser Phe Ser Gly Leu
965 970 975

18327 US Sequence Listing as filed

Leu Asp Cys Gly Asn Cys Ser Arg Ile Phe His Val Glu Lys Leu Met
980 985 990

Asn Thr Asn Leu Val Phe Ile Met Val Glu Ser Lys Gly Thr Cys Pro
995 1000 1005

Cys Asp Thr Arg Leu Leu Met Gln Ala Glu Gln Thr Ser Asp Gly
1010 1015 1020

Pro Asp Pro Cys Asp Met Val Lys Gln Pro Arg Tyr Arg Lys Gly
1025 1030 1035

Pro Asp Val Cys Phe Asp Asn Asn Val Leu Glu Asp Tyr Thr Asp
1040 1045 1050

Cys Gly Gly Val Ser Gly Leu Asn Pro Ser Leu Trp Ser Ile Phe
1055 1060 1065

Gly Leu Gln Phe Ile Leu Leu Trp Leu Val Ser Gly Ser Arg His
1070 1075 1080

Tyr Leu Leu
1085

<210> 28
<211> 1079
<212> PRT
<213> Mus musculus

<400> 28

Met Ala Ala Gly Cys Leu Leu Ala Leu Thr Leu Thr Leu Phe Gln Ser
1 5 10 15

Gly Leu Ile Gly Pro Ser Ser Glu Glu Pro Phe Pro Ser Pro Val Thr
20 25 30

Ile Lys Ser Trp Val Asp Lys Met Gln Glu Asp Leu Val Thr Leu Ala
35 40 45

Lys Thr Ala Ser Gly Val Thr Gln Leu Ala Asp Ile Tyr Glu Lys Tyr
50 55 60

Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
65 70 75 80

Ile Ala Ala Arg Asp Ile Glu Lys Leu Leu Ser Asn Arg Ser Lys Ala
85 90 95

18327 US Sequence Listing as filed

Leu Val Arg Leu Ala Met Glu Ala Glu Lys Val Gln Ala Ala His Gln
 100 105 110
 Trp Arg Glu Asp Phe Ala Ser Asn Glu Val Val Tyr Tyr Asn Ala Lys
 115 120 125
 Asp Asp Leu Asp Pro Glu Arg Asn Glu Ser Glu Pro Gly Ser Gln Arg
 130 135 140
 Ile Lys Pro Val Phe Ile Glu Asp Ala Asn Phe Gly Arg Gln Ile Ser
 145 150 155 160
 Tyr Gln His Ala Ala Val His Ile Pro Thr Asp Ile Tyr Glu Gly Ser
 165 170 175
 Thr Ile Val Leu Asn Glu Leu Asn Trp Thr Ser Ala Leu Asp Glu Val
 180 185 190
 Phe Lys Arg Asn Arg Asp Glu Asp Pro Thr Leu Leu Trp Gln Val Phe
 195 200 205
 Gly Ser Ala Thr Gly Leu Ala Arg Tyr Tyr Pro Ala Ser Pro Trp Val
 210 215 220
 Asp Asn Ser Arg Thr Pro Asn Lys Ile Asp Leu Tyr Asp Val Arg Arg
 225 230 235 240
 Arg Pro Trp Tyr Ile Gln Gly Ala Ala Ser Pro Lys Asp Met Leu Ile
 245 250 255
 Leu Val Asp Val Ser Gly Ser Val Ser Gly Leu Thr Leu Lys Leu Ile
 260 265 270
 Arg Thr Ser Val Ser Glu Met Leu Glu Thr Leu Ser Asp Asp Asp Phe
 275 280 285
 Val Asn Val Ala Ser Phe Asn Ser Asn Ala Gln Asp Val Ser Cys Phe
 290 295 300
 Gln His Leu Val Gln Ala Asn Val Arg Asn Lys Lys Val Leu Lys Asp
 305 310 315 320
 Ala Val Asn Asn Ile Thr Ala Lys Gly Ile Thr Asp Tyr Lys Lys Gly
 325 330 335
 Phe Ser Phe Ala Phe Glu Gln Leu Leu Asn Tyr Asn Val Ser Arg Ala
 340 345 350

18327 US Sequence Listing as filed

Asn Cys Asn Lys Ile Ile Met Leu Phe Thr Asp Gly Gly Glu Glu Arg
355 360 365

Ala Gln Glu Ile Phe Ala Lys Tyr Asn Lys Asp Lys Lys Val Arg Val
370 375 380

Phe Thr Phe Ser Val Gly Gln His Asn Tyr Asp Arg Gly Pro Ile Gln
385 390 395 400

Trp Met Ala Cys Glu Asn Lys Gly Tyr Tyr Tyr Glu Ile Pro Ser Ile
405 410 415

Gly Ala Ile Arg Ile Asn Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg
420 425 430

Pro Met Val Leu Ala Gly Asp Lys Ala Lys Gln Val Gln Trp Thr Asn
435 440 445

Val Tyr Leu Asp Ala Leu Glu Leu Gly Leu Val Ile Thr Gly Thr Leu
450 455 460

Pro Val Phe Asn Val Thr Gly Gln Ser Glu Asn Lys Thr Asn Leu Lys
465 470 475 480

Asn Gln Leu Ile Leu Gly Val Met Gly Val Asp Val Ser Leu Glu Asp
485 490 495

Ile Lys Arg Leu Thr Pro Arg Phe Thr Leu Cys Pro Asn Gly Tyr Tyr
500 505 510

Phe Ala Ile Asp Pro Asn Gly Tyr Val Leu Leu His Pro Asn Leu Gln
515 520 525

Pro Lys Glu Pro Val Thr Leu Asp Phe Leu Asp Ala Glu Leu Glu Asn
530 535 540

Glu Ile Lys Val Glu Ile Arg Asn Lys Met Ile Asp Gly Glu Ser Gly
545 550 555 560

Glu Lys Thr Phe Arg Thr Leu Val Lys Ser Gln Asp Glu Arg Tyr Ile
565 570 575

Asp Lys Gly Asn Arg Thr Tyr Thr Trp Thr Pro Val Asn Gly Thr Asp
580 585 590

Tyr Ser Leu Ala Leu Val Leu Pro Thr Tyr Ser Phe Tyr Tyr Ile Lys

18327 US Sequence Listing as filed

595

600

605

Ala Lys Leu Glu Glu Thr Ile Thr Gln Ala Arg Tyr Ser Glu Thr Leu
610 615 620

Lys Pro Asp Asn Phe Glu Glu Ser Gly Tyr Thr Phe Ile Ala Pro Arg
625 630 635 640

Glu Tyr Cys Asn Asp Leu Lys Pro Ser Asp Asn Asn Thr Glu Phe Leu
645 650 655

Leu Asn Phe Asn Glu Phe Ile Asp Arg Lys Thr Pro Asn Asn Pro Ser
660 665 670

Cys Asn Thr Asp Leu Ile Asn Arg Ile Leu Leu Asp Ala Gly Phe Thr
675 680 685

Asn Glu Leu Val Gln Asn Tyr Trp Ser Lys Gln Lys Asn Ile Lys Gly
690 695 700

Val Lys Ala Arg Phe Val Val Thr Asp Gly Gly Ile Thr Arg Val Tyr
705 710 715 720

Pro Lys Glu Ala Gly Glu Asn Trp Gln Glu Asn Pro Glu Thr Tyr Glu
725 730 735

Asp Ser Phe Tyr Lys Arg Ser Leu Asp Asn Asp Asn Tyr Val Phe Thr
740 745 750

Ala Pro Tyr Phe Asn Lys Ser Gly Pro Gly Ala Tyr Glu Ser Gly Ile
755 760 765

Met Val Ser Lys Ala Val Glu Leu Tyr Ile Gln Gly Lys Leu Leu Lys
770 775 780

Pro Ala Val Val Gly Ile Lys Ile Asp Val Asn Ser Trp Ile Glu Asn
785 790 795 800

Phe Thr Lys Thr Ser Ile Arg Asp Pro Cys Ala Gly Pro Val Cys Asp
805 810 815

Cys Lys Arg Asn Ser Asp Val Met Asp Cys Val Ile Leu Asp Asp Gly
820 825 830

Gly Phe Leu Leu Met Ala Asn His Asp Asp Tyr Thr Asn Gln Ile Gly
835 840 845

18327 US Sequence Listing as filed

Arg Phe Phe Gly Glu Ile Asp Pro Ser Met Met Arg His Leu Val Asn
850 855 860

Ile Ser Leu Tyr Ala Phe Asn Lys Ser Tyr Asp Tyr Gln Ser Val Cys
865 870 875 880

Asp Pro Gly Ala Ala Pro Lys Gln Gly Ala Gly His Arg Ser Ala Tyr
885 890 895

Val Pro Ser Ile Ala Asp Ile Leu Gln Ile Gly Trp Trp Ala Thr Ala
900 905 910

Ala Ala Trp Ser Ile Leu Gln Gln Leu Leu Leu Ser Leu Thr Phe Pro
915 920 925

Arg Leu Leu Glu Ala Val Glu Met Glu Glu Asp Asp Phe Thr Ala Ser
930 935 940

Leu Ser Lys Gln Ser Cys Ile Thr Glu Gln Thr Gln Tyr Phe Phe Lys
945 950 955 960

Asn Asp Thr Lys Ser Phe Ser Gly Leu Leu Asp Cys Gly Asn Cys Ser
965 970 975

Arg Ile Phe His Val Glu Lys Leu Met Asn Thr Asn Leu Val Phe Ile
980 985 990

Met Val Glu Ser Lys Gly Thr Cys Pro Cys Asp Thr Arg Leu Leu Met
995 1000 1005

Gln Ala Glu Gln Thr Ser Asp Gly Pro Asp Pro Cys Asp Met Val
1010 1015 1020

Lys Gln Pro Arg Tyr Arg Lys Gly Pro Asp Val Cys Phe Asp Asn
1025 1030 1035

Asn Val Leu Glu Asp Tyr Thr Asp Cys Gly Gly Val Ser Gly Leu
1040 1045 1050

Asn Pro Ser Leu Trp Ser Ile Phe Gly Leu Gln Phe Ile Leu Leu
1055 1060 1065

Trp Leu Val Ser Gly Ser Arg His Tyr Leu Leu
1070 1075

<210> 29
<211> 1084
<212> PRT

18327 US Sequence Listing as filed

<213> Mus musculus

<400> 29

Met Ala Ala Gly Cys Leu Leu Ala Leu Thr Leu Thr Leu Phe Gln Ser
 1 5 10 15

Gly Leu Ile Gly Pro Ser Ser Glu Glu Pro Phe Pro Ser Pro Val Thr
 20 25 30

Ile Lys Ser Trp Val Asp Lys Met Gln Glu Asp Leu Val Thr Leu Ala
 35 40 45

Lys Thr Ala Ser Gly Val Thr Gln Leu Ala Asp Ile Tyr Glu Lys Tyr
 50 55 60

Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
 65 70 75 80

Ile Ala Ala Arg Asp Ile Glu Lys Leu Leu Ser Asn Arg Ser Lys Ala
 85 90 95

Leu Val Arg Leu Ala Met Glu Ala Glu Lys Val Gln Ala Ala His Gln
 100 105 110

Trp Arg Glu Asp Phe Ala Ser Asn Glu Val Val Tyr Tyr Asn Ala Lys
 115 120 125

Asp Asp Leu Asp Pro Glu Arg Asn Glu Ser Glu Pro Gly Ser Gln Arg
 130 135 140

Ile Lys Pro Val Phe Ile Glu Asp Ala Asn Phe Gly Arg Gln Ile Ser
 145 150 155 160

Tyr Gln His Ala Ala Val His Ile Pro Thr Asp Ile Tyr Glu Gly Ser
 165 170 175

Thr Ile Val Leu Asn Glu Leu Asn Trp Thr Ser Ala Leu Asp Glu Val
 180 185 190

Phe Lys Arg Asn Arg Asp Glu Asp Pro Thr Leu Leu Trp Gln Val Phe
 195 200 205

Gly Ser Ala Thr Gly Leu Ala Arg Tyr Tyr Pro Ala Ser Pro Trp Val
 210 215 220

Asp Asn Ser Arg Thr Pro Asn Lys Ile Asp Leu Tyr Asp Val Arg Arg
 225 230 235 240

18327 US Sequence Listing as filed

Arg Pro Trp Tyr Ile Gln Gly Ala Ala Ser Pro Lys Asp Met Leu Ile
245 250 255

Leu Val Asp Val Ser Gly Ser Val Ser Gly Leu Thr Leu Lys Leu Ile
260 265 270

Arg Thr Ser Val Ser Glu Met Leu Glu Thr Leu Ser Asp Asp Asp Phe
275 280 285

Val Asn Val Ala Ser Phe Asn Ser Asn Ala Gln Asp Val Ser Cys Phe
290 295 300

Gln His Leu Val Gln Ala Asn Val Arg Asn Lys Lys Val Leu Lys Asp
305 310 315 320

Ala Val Asn Asn Ile Thr Ala Lys Gly Ile Thr Asp Tyr Lys Lys Gly
325 330 335

Phe Ser Phe Ala Phe Glu Gln Leu Leu Asn Tyr Asn Val Ser Arg Ala
340 345 350

Asn Cys Asn Lys Ile Ile Met Leu Phe Thr Asp Gly Gly Glu Glu Arg
355 360 365

Ala Gln Glu Ile Phe Ala Lys Tyr Asn Lys Asp Lys Lys Val Arg Val
370 375 380

Phe Thr Phe Ser Val Gly Gln His Asn Tyr Asp Arg Gly Pro Ile Gln
385 390 395 400

Trp Met Ala Cys Glu Asn Lys Gly Tyr Tyr Tyr Glu Ile Pro Ser Ile
405 410 415

Gly Ala Ile Arg Ile Asn Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg
420 425 430

Pro Met Val Leu Ala Gly Asp Lys Ala Lys Gln Val Gln Trp Thr Asn
435 440 445

Val Tyr Leu Asp Ala Leu Glu Leu Gly Leu Val Ile Thr Gly Thr Leu
450 455 460

Pro Val Phe Asn Val Thr Gly Gln Ser Glu Asn Lys Thr Asn Leu Lys
465 470 475 480

Asn Gln Leu Ile Leu Gly Val Met Gly Val Asp Val Ser Leu Glu Asp
485 490 495

18327 US Sequence Listing as filed

Ile Lys Arg Leu Thr Pro Arg Phe Thr Leu Cys Pro Asn Gly Tyr Tyr
500 505 510

Phe Ala Ile Asp Pro Asn Gly Tyr Val Leu Leu His Pro Asn Leu Gln
515 520 525

Pro Lys Asn Pro Lys Ser Gln Glu Pro Val Thr Leu Asp Phe Leu Asp
530 535 540

Ala Glu Leu Glu Asn Glu Ile Lys Val Glu Ile Arg Asn Lys Met Ile
545 550 555 560

Asp Gly Glu Ser Gly Glu Lys Thr Phe Arg Thr Leu Val Lys Ser Gln
565 570 575

Asp Glu Arg Tyr Ile Asp Lys Gly Asn Arg Thr Tyr Thr Trp Thr Pro
580 585 590

Val Asn Gly Thr Asp Tyr Ser Leu Ala Leu Val Leu Pro Thr Tyr Ser
595 600 605

Phe Tyr Tyr Ile Lys Ala Lys Leu Glu Glu Thr Ile Thr Gln Ala Arg
610 615 620

Tyr Ser Glu Thr Leu Lys Pro Asp Asn Phe Glu Glu Ser Gly Tyr Thr
625 630 635 640

Phe Ile Ala Pro Arg Glu Tyr Cys Asn Asp Leu Lys Pro Ser Asp Asn
645 650 655

Asn Thr Glu Phe Leu Leu Asn Phe Asn Glu Phe Ile Asp Arg Lys Thr
660 665 670

Pro Asn Asn Pro Ser Cys Asn Thr Asp Leu Ile Asn Arg Ile Leu Leu
675 680 685

Asp Ala Gly Phe Thr Asn Glu Leu Val Gln Asn Tyr Trp Ser Lys Gln
690 695 700

Lys Asn Ile Lys Gly Val Lys Ala Arg Phe Val Val Thr Asp Gly Gly
705 710 715 720

Ile Thr Arg Val Tyr Pro Lys Glu Ala Gly Glu Asn Trp Gln Glu Asn
725 730 735

Pro Glu Thr Tyr Glu Asp Ser Phe Tyr Lys Arg Ser Leu Asp Asn Asp

18327 US Sequence Listing as filed

740

745

750

Asn Tyr Val Phe Thr Ala Pro Tyr Phe Asn Lys Ser Gly Pro Gly Ala
755 760 765

Tyr Glu Ser Gly Ile Met Val Ser Lys Ala Val Glu Leu Tyr Ile Gln
770 775 780

Gly Lys Leu Leu Lys Pro Ala Val Val Gly Ile Lys Ile Asp Val Asn
785 790 795 800

Ser Trp Ile Glu Asn Phe Thr Lys Thr Ser Ile Arg Asp Pro Cys Ala
805 810 815

Gly Pro Val Cys Asp Cys Lys Arg Asn Ser Asp Val Met Asp Cys Val
820 825 830

Ile Leu Asp Asp Gly Gly Phe Leu Leu Met Ala Asn His Asp Asp Tyr
835 840 845

Thr Asn Gln Ile Gly Arg Phe Phe Gly Glu Ile Asp Pro Ser Met Met
850 855 860

Arg His Leu Val Asn Ile Ser Leu Tyr Ala Phe Asn Lys Ser Tyr Asp
865 870 875 880

Tyr Gln Ser Val Cys Asp Pro Gly Ala Ala Pro Lys Gln Gly Ala Gly
885 890 895

His Arg Ser Ala Tyr Val Pro Ser Ile Ala Asp Ile Leu Gln Ile Gly
900 905 910

Trp Trp Ala Thr Ala Ala Ala Trp Ser Ile Leu Gln Gln Leu Leu Leu
915 920 925

Ser Leu Thr Phe Pro Arg Leu Leu Glu Ala Val Glu Met Glu Glu Asp
930 935 940

Asp Phe Thr Ala Ser Leu Ser Lys Gln Ser Cys Ile Thr Glu Gln Thr
945 950 955 960

Gln Tyr Phe Phe Lys Asn Asp Thr Lys Ser Phe Ser Gly Leu Leu Asp
965 970 975

Cys Gly Asn Cys Ser Arg Ile Phe His Val Glu Lys Leu Met Asn Thr
980 985 990

18327 US Sequence Listing as filed

Asn Leu Val Phe Ile Met Val Glu Ser Lys Gly Thr Cys Pro Cys Asp
995 1000 1005

Thr Arg Leu Leu Met Gln Ala Glu Gln Thr Ser Asp Gly Pro Asp
1010 1015 1020

Pro Cys Asp Met Val Lys Gln Pro Arg Tyr Arg Lys Gly Pro Asp
1025 1030 1035

Val Cys Phe Asp Asn Asn Val Leu Glu Asp Tyr Thr Asp Cys Gly
1040 1045 1050

Gly Val Ser Gly Leu Asn Pro Ser Leu Trp Ser Ile Phe Gly Leu
1055 1060 1065

Gln Phe Ile Leu Leu Trp Leu Val Ser Gly Ser Arg His Tyr Leu
1070 1075 1080

Leu

<210> 30
<211> 1091
<212> PRT
<213> Rattus norvegicus

<400> 30

Met Ala Ala Gly Cys Leu Leu Ala Leu Thr Leu Thr Leu Phe Gln Ser
1 5 10 15

Trp Leu Ile Gly Pro Ser Ser Glu Glu Pro Phe Pro Ser Pro Val Thr
20 25 30

Ile Lys Ser Trp Val Asp Lys Met Gln Glu Asp Leu Val Thr Leu Ala
35 40 45

Lys Thr Ala Ser Gly Val Thr Gln Leu Ala Asp Ile Tyr Glu Lys Tyr
50 55 60

Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
65 70 75 80

Ile Ala Ala Arg Asp Ile Glu Lys Leu Leu Ser Asn Arg Ser Lys Ala
85 90 95

Leu Val Arg Leu Ala Met Glu Ala Glu Lys Val Gln Ala Ala His Gln
100 105 110

18327 US Sequence Listing as filed

Trp Arg Glu Asp Phe Ala Ser Asn Glu Val Val Tyr Tyr Asn Ala Lys
115 120 125

Asp Asp Leu Asp Pro Glu Arg Asn Glu Ser Glu Ser Gly Ser Gln Arg
130 135 140

Ile Lys Pro Val Phe Ile Glu Asp Ala Asn Phe Gly Arg Gln Ile Ser
145 150 155 160

Tyr Gln His Ala Ala Val His Ile Pro Thr Asp Ile Tyr Glu Gly Ser
165 170 175

Thr Ile Val Leu Asn Glu Leu Asn Trp Thr Ser Ala Leu Asp Glu Val
180 185 190

Phe Lys Arg Asn Arg Asp Glu Asp Pro Thr Leu Leu Trp Gln Val Phe
195 200 205

Ala Ala Asp Arg Leu Ala Arg Tyr Tyr Pro Ala Ser Pro Trp Val Asp
210 215 220

Asn Ser Arg Thr Pro Asn Lys Ile Asp Leu Tyr Asp Val Arg Arg Arg
225 230 235 240

Pro Trp Tyr Ile Gln Gly Ala Ala Ser Pro Lys Asp Met Leu Ile Leu
245 250 255

Val Asp Val Ser Gly Ser Val Ser Gly Leu Thr Leu Lys Leu Ile Arg
260 265 270

Thr Ser Val Ser Glu Met Leu Glu Thr Leu Ser Asp Asp Asp Phe Val
275 280 285

Asn Val Ala Ser Phe Asn Ser Asn Ala Gln Asp Val Ser Cys Phe Gln
290 295 300

His Leu Val Gln Ala Asn Val Arg Asn Lys Lys Val Leu Lys Asp Ala
305 310 315 320

Val Asn Asn Ile Thr Ala Lys Gly Ile Thr Asp Tyr Lys Lys Gly Phe
325 330 335

Thr Phe Ala Phe Glu Gln Leu Leu Asn Tyr Asn Val Ser Arg Ala Asn
340 345 350

Cys Asn Lys Ile Ile Met Leu Phe Thr Asp Gly Gly Glu Glu Arg Ala
355 360 365

18327 US Sequence Listing as filed

Gln Glu Ile Phe Ala Lys Tyr Asn Lys Asp Lys Lys Val Arg Val Phe
370 375 380

Thr Phe Ser Val Gly Gln His Asn Tyr Asp Arg Gly Pro Ile Gln Trp
385 390 395 400

Met Ala Cys Glu Asn Lys Gly Tyr Tyr Tyr Glu Ile Pro Ser Ile Gly
405 410 415

Ala Ile Arg Ile Asn Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg Pro
420 425 430

Met Val Leu Ala Gly Asp Lys Ala Lys Gln Val Gln Trp Thr Asn Val
435 440 445

Tyr Leu Asp Ala Leu Glu Leu Gly Leu Val Ile Thr Gly Thr Leu Pro
450 455 460

Val Phe Asn Val Thr Gly Gln Ser Glu Asn Lys Thr Asn Leu Lys Asn
465 470 475 480

Gln Leu Ile Leu Gly Val Met Gly Val Asp Val Ser Leu Glu Asp Ile
485 490 495

Lys Arg Leu Thr Pro Arg Phe Thr Leu Cys Pro Asn Gly Tyr Tyr Phe
500 505 510

Ala Ile Asp Pro Asn Gly Tyr Val Leu Leu His Pro Asn Leu Gln Pro
515 520 525

Lys Asn Pro Lys Ser Gln Glu Pro Val Thr Leu Asp Phe Leu Asp Ala
530 535 540

Glu Leu Glu Asn Asp Ile Lys Val Glu Ile Arg Asn Lys Met Ile Asp
545 550 555 560

Gly Glu Ser Gly Glu Lys Thr Phe Arg Thr Leu Val Lys Ser Gln Asp
565 570 575

Glu Arg Tyr Ile Asp Lys Gly Asn Arg Thr Tyr Thr Trp Thr Pro Val
580 585 590

Asn Gly Thr Asp Tyr Arg Tyr Leu Ala Leu Val Leu Pro Thr Tyr Ser
595 600 605

Phe Tyr Tyr Ile Lys Ala Lys Ile Glu Glu Thr Ile Thr Gln Ala Arg
610 615 620

18327 US Sequence Listing as filed

Ser Lys Lys Gly Lys Met Lys Asp Ser Glu Thr Leu Lys Pro Asp Asn
625 630 635 640

Phe Glu Glu Ser Gly Tyr Thr Phe Ile Ala Pro Arg Glu Tyr Cys Asn
645 650 655

Asp Leu Lys Pro Ser Asp Asn Asn Thr Glu Phe Leu Leu Asn Phe Asn
660 665 670

Glu Phe Ile Asp Arg Lys Thr Pro Asn Asn Pro Ser Cys Asn Thr Asp
675 680 685

Leu Ile Asn Arg Ile Leu Leu Asp Ala Gly Phe Thr Asn Glu Leu Val
690 695 700

Gln Asn Tyr Trp Ser Lys Gln Lys Asn Ile Lys Gly Val Lys Ala Arg
705 710 715 720

Phe Val Val Thr Asp Gly Gly Ile Thr Arg Val Tyr Pro Lys Glu Ala
725 730 735

Gly Glu Asn Trp Gln Glu Asn Pro Glu Thr Tyr Glu Asp Ser Phe Tyr
740 745 750

Lys Arg Ser Leu Asp Asn Asp Asn Tyr Val Phe Thr Ala Pro Tyr Phe
755 760 765

Asn Lys Ser Gly Pro Gly Ala Tyr Glu Ser Gly Ile Met Val Ser Lys
770 775 780

Ala Val Glu Leu Tyr Ile Gln Gly Lys Leu Leu Lys Pro Ala Val Val
785 790 795 800

Gly Ile Lys Ile Asp Val Asn Ser Trp Ile Glu Asn Phe Thr Lys Thr
805 810 815

Ser Ile Arg Asp Pro Cys Ala Gly Pro Val Cys Asp Cys Lys Arg Asn
820 825 830

Ser Asp Val Met Asp Cys Val Ile Leu Asp Asp Gly Gly Phe Leu Leu
835 840 845

Met Ala Asn His Asp Asp Tyr Thr Asn Gln Ile Gly Arg Phe Phe Gly
850 855 860

Glu Ile Asp Pro Arg Met Met Arg His Leu Val Asn Ile Ser Leu Tyr
865 870 875 880 885 890 895 900

18327 US Sequence Listing as filed

865					870					875					880
Ala	Phe	Asn	Lys	Ser 885	Tyr	Asp	Tyr	Gln	Ser 890	Val	Cys	Asp	Pro	Gly 895	Ala
Ala	Pro	Lys	Gln 900	Gly	Ala	Gly	His	Arg 905	Ser	Ala	Tyr	Val	Pro 910	Ser	Ile
Thr	Asp	Ile 915	Leu	Gln	Ile	Gly	Trp 920	Trp	Ala	Thr	Ala	Ala 925	Ala	Trp	Ser
Ile	Leu 930	Gln	Gln	Leu	Leu	Leu 935	Ser	Leu	Thr	Phe	Pro 940	Arg	Leu	Leu	Glu
Ala 945	Val	Glu	Met	Glu	Glu 950	Asp	Asp	Phe	Thr	Ala 955	Ser	Leu	Ser	Lys	Gln 960
Ser	Cys	Ile	Thr	Glu 965	Gln	Thr	Gln	Tyr	Phe 970	Phe	Lys	Asn	Asp	Thr 975	Lys
Ser	Phe	Ser	Gly 980	Leu	Leu	Asp	Cys	Gly 985	Asn	Cys	Ser	Arg	Ile 990	Phe	His
Val	Glu	Lys 995	Leu	Met	Asn	Thr	Asn 1000	Leu	Val	Phe	Ile	Met 1005	Val	Glu	Ser
Lys	Gly 1010	Thr	Cys	Pro	Cys	Asp 1015	Thr	Arg	Leu	Leu	Met 1020	Gln	Ala	Glu	
Gln	Thr 1025	Ser	Asp	Gly	Pro	Asp 1030	Pro	Cys	Asp	Met	Val 1035	Lys	Gln	Pro	
Arg	Tyr 1040	Arg	Lys	Gly	Pro	Asp 1045	Val	Cys	Phe	Asp	Asn 1050	Asn	Val	Leu	
Glu	Asp 1055	Tyr	Thr	Asp	Cys	Gly 1060	Gly	Val	Ser	Gly	Leu 1065	Asn	Pro	Ser	
Leu	Trp 1070	Ser	Ile	Phe	Gly	Leu 1075	Gln	Phe	Ile	Leu	Leu 1080	Trp	Leu	Val	
Ser	Gly 1085	Ser	Arg	His	Tyr	Leu 1090	Trp								

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<210> 31
<211> 1091
<212> PRT
<213> Sus scrofa
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18327 US Sequence Listing as filed

<400> 31

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Met Ala Ala Gly Cys Leu Leu Ala Leu Thr Leu Thr Leu Phe Gln Ser
1      5      10      15

Leu Leu Ile Gly Pro Ser Ser Gln Glu Pro Phe Pro Ser Ala Val Thr
20      25      30

Ile Lys Ser Trp Val Asp Lys Met Gln Glu Asp Leu Val Thr Leu Ala
35      40      45

Lys Thr Ala Ser Gly Val Asn Gln Leu Val Asp Ile Tyr Glu Lys Tyr
50      55      60

Gln Asp Leu Tyr Thr Val Glu Pro Asn Asn Ala Arg Gln Leu Val Glu
65      70      75      80

Ile Ala Ala Arg Asp Ile Glu Lys Leu Leu Ser Asn Arg Ser Lys Ala
85      90      95

Leu Val Arg Leu Ala Leu Glu Ala Glu Lys Val Gln Ala Ala His Gln
100     105     110

Trp Arg Glu Asp Phe Ala Ser Asn Glu Val Val Tyr Tyr Asn Ala Lys
115     120     125

Asp Asp Leu Asp Pro Glu Lys Asn Asp Ser Glu Pro Gly Ser Gln Arg
130     135     140

Ile Lys Pro Val Phe Ile Asp Asp Ala Asn Phe Gly Arg Gln Ile Ser
145     150     155     160

Tyr Gln His Ala Ala Val His Ile Pro Thr Asp Ile Tyr Glu Gly Ser
165     170     175

Thr Ile Val Leu Asn Glu Leu Asn Trp Thr Ser Ala Leu Asp Glu Val
180     185     190

Phe Lys Lys Asn Arg Glu Glu Asp Pro Ser Leu Leu Trp Gln Val Phe
195     200     205

Gly Ser Ala Thr Gly Leu Ala Arg Tyr Tyr Pro Ala Ser Pro Trp Val
210     215     220

Asp Asn Ser Arg Thr Pro Asn Lys Ile Asp Leu Tyr Asp Val Arg Arg
225     230     235     240

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18327 US Sequence Listing as filed

Arg Pro Trp Tyr Ile Gln Gly Ala Ala Ser Pro Lys Asp Met Leu Ile
245 250 255

Leu Val Asp Val Ser Gly Ser Val Ser Gly Leu Thr Leu Lys Leu Ile
260 265 270

Arg Thr Ser Val Ser Glu Met Leu Glu Thr Leu Ser Asp Asp Asp Phe
275 280 285

Val Asn Val Ala Ser Phe Asn Ser Asn Ala Gln Asp Val Ser Cys Phe
290 295 300

Gln His Leu Val Gln Ala Asn Val Arg Asn Lys Lys Val Leu Lys Asp
305 310 315 320

Ala Val Asn Asn Ile Thr Ala Lys Gly Ile Thr Asp Tyr Lys Lys Gly
325 330 335

Phe Ser Phe Ala Phe Glu Gln Leu Leu Asn Tyr Asn Val Ser Arg Ala
340 345 350

Asn Cys Asn Lys Ile Ile Met Leu Phe Thr Asp Gly Gly Glu Glu Arg
355 360 365

Ala Gln Glu Ile Phe Ala Lys Tyr Asn Lys Asp Lys Lys Val Arg Val
370 375 380

Phe Thr Phe Ser Val Gly Gln His Asn Tyr Asp Arg Gly Pro Ile Gln
385 390 395 400

Trp Met Ala Cys Glu Asn Lys Gly Tyr Tyr Tyr Glu Ile Pro Ser Ile
405 410 415

Gly Ala Ile Arg Ile Asn Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg
420 425 430

Pro Met Val Leu Ala Gly Asp Lys Ala Lys Gln Val Gln Trp Thr Asn
435 440 445

Val Tyr Leu Asp Ala Leu Glu Leu Gly Leu Val Ile Thr Gly Thr Leu
450 455 460

Pro Val Phe Asn Ile Thr Gly Gln Asn Glu Asn Lys Thr Asn Leu Lys
465 470 475 480

Asn Gln Leu Ile Leu Gly Val Met Gly Val Asp Val Ser Leu Glu Asp
485 490 495

18327 US Sequence Listing as filed

Ile Lys Arg Leu Thr Pro Arg Phe Thr Leu Cys Pro Asn Gly Tyr Tyr
500 505 510

Phe Ala Ile Asp Pro Asn Gly Tyr Val Leu Leu His Pro Asn Leu Gln
515 520 525

Pro Lys Asn Pro Lys Ser Gln Glu Pro Val Thr Leu Asp Phe Leu Asp
530 535 540

Ala Glu Leu Glu Asn Asp Ile Lys Val Glu Ile Arg Asn Lys Met Ile
545 550 555 560

Asp Gly Glu Ser Gly Glu Lys Thr Phe Arg Thr Leu Val Lys Ser Gln
565 570 575

Asp Glu Arg Tyr Ile Asp Lys Gly Asn Arg Thr Tyr Thr Trp Thr Pro
580 585 590

Val Asn Gly Thr Asp Tyr Ser Leu Ala Leu Val Leu Pro Thr Tyr Ser
595 600 605

Phe Tyr Tyr Ile Lys Ala Lys Ile Glu Glu Thr Ile Thr Gln Ala Arg
610 615 620

Ser Lys Lys Gly Lys Met Lys Asp Ser Glu Thr Leu Lys Pro Asp Asn
625 630 635 640

Phe Glu Glu Ser Gly Tyr Thr Phe Ile Ala Pro Arg Asp Tyr Cys Asn
645 650 655

Asp Leu Lys Ile Ser Asp Asn Asn Thr Glu Phe Leu Leu Asn Phe Asn
660 665 670

Glu Phe Ile Asp Arg Lys Thr Pro Asn Asn Pro Ser Cys Asn Thr Asp
675 680 685

Leu Ile Asn Arg Val Leu Leu Asp Ala Gly Phe Thr Asn Glu Leu Val
690 695 700

Gln Asn Tyr Trp Ser Lys Gln Lys Asn Ile Lys Gly Val Lys Ala Arg
705 710 715 720

Phe Val Val Thr Asp Gly Gly Ile Thr Arg Val Tyr Pro Lys Glu Ala
725 730 735

Gly Glu Asn Trp Gln Glu Asn Pro Glu Thr Tyr Glu Asp Ser Phe Tyr
740 745 750

18327 US Sequence Listing as filed

Lys Arg Ser Leu Asp Asn Asp Asn Tyr Val Phe Thr Ala Pro Tyr Phe
 755 760 765
 Asn Lys Ser Gly Pro Gly Ala Tyr Glu Ser Gly Ile Met Val Ser Lys
 770 775 780
 Ala Val Glu Ile Tyr Ile Gln Gly Lys Leu Leu Lys Pro Ala Val Val
 785 790 795 800
 Gly Ile Lys Ile Asp Val Asn Ser Trp Ile Glu Asn Phe Thr Lys Thr
 805 810 815
 Ser Ile Arg Asp Pro Cys Ala Gly Pro Val Cys Asp Cys Lys Arg Asn
 820 825 830
 Ser Asp Val Met Asp Cys Val Ile Leu Asp Asp Gly Gly Phe Leu Leu
 835 840 845
 Met Ala Asn His Asp Asp Tyr Thr Asn Gln Ile Gly Arg Phe Phe Gly
 850 855 860
 Glu Ile Asp Pro Ser Leu Met Arg His Leu Val Asn Ile Ser Val Tyr
 865 870 875 880
 Ala Phe Asn Lys Ser Tyr Asp Tyr Gln Ser Val Cys Glu Pro Gly Ala
 885 890 895
 Ala Pro Lys Gln Gly Ala Gly His Arg Ser Ala Tyr Val Pro Ser Ile
 900 905 910
 Ala Asp Ile Leu His Ile Gly Trp Trp Ala Thr Ala Ala Ala Trp Ser
 915 920 925
 Ile Leu Gln Gln Phe Leu Leu Ser Leu Thr Phe Pro Arg Leu Leu Glu
 930 935 940
 Ala Val Glu Met Glu Asp Asp Asp Phe Thr Ala Ser Leu Ser Lys Gln
 945 950 955 960
 Ser Cys Ile Thr Glu Gln Thr Gln Tyr Phe Phe Asp Asn Asp Ser Lys
 965 970 975
 Ser Phe Ser Gly Val Leu Asp Cys Gly Asn Cys Ser Arg Ile Phe His
 980 985 990
 Val Glu Lys Leu Met Asn Thr Asn Leu Ile Phe Ile Met Val Glu Ser
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18327 US Sequence Listing as filed

995

1000

1005

Lys Gly Thr Cys Pro Cys Asp Thr Arg Leu Leu Ile Gln Ala Glu
1010 1015 1020

Gln Thr Ser Asp Gly Pro Asp Pro Cys Asp Met Val Lys Gln Pro
1025 1030 1035

Arg Tyr Arg Lys Gly Pro Asp Val Cys Phe Asp Asn Asn Ala Leu
1040 1045 1050

Glu Asp Tyr Thr Asp Cys Gly Gly Val Ser Gly Leu Asn Pro Ser
1055 1060 1065

Leu Trp Ser Ile Phe Gly Ile Gln Cys Val Leu Leu Trp Leu Leu
1070 1075 1080

Ser Gly Ser Arg His Tyr Gln Leu
1085 1090

<210> 32
<211> 1156
<212> PRT
<213> Mus musculus
<400> 32

Met Ala Val Pro Ala Arg Thr Cys Gly Ala Ser Trp Pro Gly Pro Val
1 5 10 15

Arg Thr Ala Arg Pro Trp Pro Gly Arg Gly Pro Arg Pro Cys Pro Asp
20 25 30

Pro Arg Gly Pro Ala Ser Gly Pro Ala Arg Pro Leu Leu Leu Leu Leu
35 40 45

Pro Pro Leu Leu Leu Leu Pro Leu Leu Thr Ala Pro Gly Ala Ser Ala
50 55 60

Tyr Ser Phe Pro Gln Gln His Thr Met Gln His Trp Ala Arg Arg Leu
65 70 75 80

Glu Gln Glu Ile Asp Gly Val Met Arg Ile Phe Gly Gly Val Gln Gln
85 90 95

Leu Arg Glu Ile Tyr Lys Asp Asn Arg Asn Leu Phe Glu Val Gln Glu
100 105 110

Asn Glu Pro Gln Lys Leu Val Glu Lys Val Ala Gly Asp Ile Glu Ser
Page 55

18327 US Sequence Listing as filed

115

120

125

Leu Leu Asp Arg Lys Val Gln Ala Leu Lys Arg Leu Ala Asp Ala Ala
130 135 140

Glu Asn Phe Gln Lys Ala His Arg Trp Gln Asp Asn Ile Lys Glu Glu
145 150 155 160

Asp Ile Met Tyr Tyr Asp Ala Lys Ala Asp Ala Glu Leu Asp Asp Pro
165 170 175

Glu Ser Glu Asp Met Glu Arg Gly Ser Lys Thr Ser Ala Leu Arg Leu
180 185 190

Asp Phe Ile Glu Asp Pro Asn Phe Lys Asn Lys Val Asn Tyr Ser Tyr
195 200 205

Thr Ala Val Gln Ile Pro Thr Asp Ile Tyr Lys Gly Ser Thr Val Ile
210 215 220

Leu Asn Glu Leu Asn Trp Thr Glu Ala Leu Glu Asn Val Phe Ile Glu
225 230 235 240

Asn Arg Arg Gln Asp Pro Thr Leu Leu Trp Gln Val Phe Gly Ser Ala
245 250 255

Thr Gly Val Thr Arg Tyr Tyr Pro Ala Thr Pro Trp Arg Ala Pro Lys
260 265 270

Lys Ile Asp Leu Tyr Asp Val Arg Arg Arg Pro Trp Tyr Ile Gln Gly
275 280 285

Ala Ser Ser Pro Lys Asp Met Val Ile Ile Val Asp Val Ser Gly Ser
290 295 300

Val Ser Gly Leu Thr Leu Lys Leu Met Lys Thr Ser Val Cys Glu Met
305 310 315 320

Leu Asp Thr Leu Ser Asp Asp Asp Tyr Val Asn Val Ala Ser Phe Asn
325 330 335

Glu Lys Ala Gln Pro Val Ser Cys Phe Thr His Leu Val Gln Ala Asn
340 345 350

Val Arg Asn Lys Lys Val Phe Lys Glu Ala Val Gln Gly Met Val Ala
355 360 365

18327 US Sequence Listing as filed

Lys Gly Thr Thr Gly Tyr Lys Ala Gly Phe Glu Tyr Ala Phe Asp Gln
370 375 380

Leu Gln Asn Ser Asn Ile Thr Arg Ala Asn Cys Asn Lys Met Ile Met
385 390 395 400

Met Phe Thr Asp Gly Gly Glu Asp Arg Val Gln Asp Val Phe Glu Lys
405 410 415

Tyr Asn Trp Pro Asn Arg Thr Val Arg Val Phe Thr Phe Ser Val Gly
420 425 430

Gln His Asn Tyr Asp Val Thr Pro Leu Gln Trp Met Ala Cys Thr Asn
435 440 445

Lys Gly Tyr Tyr Phe Glu Ile Pro Ser Ile Gly Ala Ile Arg Ile Asn
450 455 460

Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg Pro Met Val Leu Ala Gly
465 470 475 480

Lys Asp Ala Lys Gln Val Gln Trp Thr Asn Val Tyr Glu Asp Ala Leu
485 490 495

Gly Leu Gly Leu Val Val Thr Gly Thr Leu Pro Val Phe Asn Leu Thr
500 505 510

Gln Asp Gly Pro Gly Glu Lys Lys Asn Gln Leu Ile Leu Gly Val Met
515 520 525

Gly Ile Asp Val Ala Leu Asn Asp Ile Lys Arg Leu Thr Pro Asn Tyr
530 535 540

Thr Leu Gly Ala Asn Gly Tyr Val Phe Ala Ile Asp Leu Asn Gly Tyr
545 550 555 560

Val Leu Leu His Pro Asn Leu Lys Pro Gln Thr Thr Asn Phe Arg Glu
565 570 575

Pro Val Thr Leu Asp Phe Leu Asp Ala Glu Leu Glu Asp Glu Asn Lys
580 585 590

Glu Glu Ile Arg Arg Ser Met Ile Asp Gly Asp Lys Gly His Lys Gln
595 600 605

Ile Arg Thr Leu Val Lys Ser Leu Asp Glu Arg Tyr Ile Asp Glu Val
610 615 620

18327 US Sequence Listing as filed

Ile Arg Asn Tyr Thr Trp Val Pro Ile Arg Ser Thr Asn Tyr Ser Leu
625 630 635 640

Gly Leu Val Leu Pro Pro Tyr Ser Thr Tyr Tyr Leu Gln Ala Asn Leu
645 650 655

Arg Asp Gln Ile Leu Gln Val Lys Leu Pro Ile Ser Lys Leu Lys Asp
660 665 670

Phe Glu Phe Leu Leu Pro Ser Ser Phe Glu Ser Glu Gly His Val Phe
675 680 685

Ile Ala Pro Arg Glu Tyr Cys Lys Asp Leu Asn Ala Ser Asp Asn Ser
690 695 700

Thr Glu Phe Leu Lys Asp Phe Ile Glu Leu Met Glu Lys Val Thr Pro
705 710 715 720

Asp Ser Lys Gln Cys Asn Asn Phe Leu Leu His Asn Leu Ile Leu Asp
725 730 735

Thr Gly Ile Thr Gln Gln Leu Val Glu Arg Val Trp Arg Asp Gln Asp
740 745 750

Leu Asn Thr Tyr Ser Leu Leu Ala Val Phe Ala Ala Thr Asp Gly Gly
755 760 765

Ile Thr Arg Val Phe Pro Asn Lys Ala Ala Glu Asp Trp Thr Glu Asn
770 775 780

Pro Glu Pro Phe Asn Ala Ser Phe Tyr Arg Arg Ser Leu Asp Asn His
785 790 795 800

Gly Tyr Ile Phe Lys Pro Pro His Gln Asp Ser Leu Leu Arg Pro Leu
805 810 815

Glu Leu Glu Asn Asp Thr Val Gly Val Leu Val Ser Thr Ala Val Glu
820 825 830

Leu Ser Leu Gly Arg Arg Thr Leu Arg Pro Ala Val Val Gly Val Lys
835 840 845

Leu Asp Leu Glu Ala Trp Ala Glu Lys Phe Lys Val Leu Ala Ser Asn
850 855 860

Arg Thr His Gln Asp Gln Pro Gln Lys Cys Gly Pro Ser Ser His Cys
865 870 875 880

18327 US Sequence Listing as filed

Glu Met Asp Cys Glu Val Asn Asn Glu Asp Leu Leu Cys Val Leu Ile
885 890 895

Asp Asp Gly Gly Phe Leu Val Leu Ser Asn Gln Asn His Gln Trp Asp
900 905 910

Gln Val Gly Arg Phe Phe Ser Glu Val Asp Ala Asn Leu Met Leu Ala
915 920 925

Leu Tyr Asn Asn Ser Phe Tyr Thr Arg Lys Glu Ser Tyr Asp Tyr Gln
930 935 940

Ala Ala Cys Ala Pro Gln Pro Pro Gly Asn Leu Gly Ala Ala Pro Arg
945 950 955 960

Gly Val Phe Val Pro Thr Ile Ala Asp Phe Leu Asn Leu Ala Trp Trp
965 970 975

Thr Ser Ala Ala Ala Trp Ser Leu Phe Gln Gln Leu Leu Tyr Gly Leu
980 985 990

Ile Tyr His Ser Trp Phe Gln Ala Asp Pro Ala Glu Ala Glu Gly Ser
995 1000 1005

Pro Glu Thr Arg Glu Ser Ser Cys Val Met Lys Gln Thr Gln Tyr
1010 1015 1020

Tyr Phe Gly Ser Val Asn Ala Ser Tyr Asn Ala Ile Ile Asp Cys
1025 1030 1035

Gly Asn Cys Ser Arg Leu Phe His Ala Gln Arg Leu Thr Asn Thr
1040 1045 1050

Asn Leu Leu Phe Val Val Ala Glu Lys Pro Leu Cys Ser Gln Cys
1055 1060 1065

Glu Ala Gly Arg Leu Leu Gln Lys Glu Thr His Cys Pro Ala Asp
1070 1075 1080

Gly Pro Glu Gln Cys Glu Leu Val Gln Arg Pro Arg Tyr Arg Arg
1085 1090 1095

Gly Pro His Ile Cys Phe Asp Tyr Asn Ala Thr Glu Asp Thr Ser
1100 1105 1110

Asp Cys Gly Arg Gly Ala Ser Phe Pro Pro Ser Leu Gly Val Leu
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18327 US Sequence Listing as filed

1115

1120

1125

Val Ser Leu Gln Leu Leu Leu Leu Leu Gly Leu Pro Pro Arg Pro
1130 1135 1140

Gln Pro Gln Val His Ser Phe Ala Ala Ser Arg His Leu
1145 1150 1155

<210> 33

<211> 1157

<212> PRT

<213> Rattus norvegicus

<400> 33

Met Ala Val Pro Ala Arg Thr Cys Gly Ala Ser Trp Pro Gly Pro Val
1 5 10 15

Arg Thr Ala Arg Pro Trp Pro Gly Arg Gly Pro Arg Pro Cys Pro Asp
20 25 30

Pro Arg Gly Pro Ala Ser Gly Pro Ala Arg Pro Leu Leu Leu Leu
35 40 45

Pro Pro Leu Leu Leu Leu Pro Leu Leu Thr Ala Pro Gly Ala Ser Ala
50 55 60

Tyr Ser Phe Pro Gln Gln His Thr Met Gln His Trp Ala Arg Arg Leu
65 70 75 80

Glu Gln Glu Ile Asp Gly Val Met Arg Ile Phe Gly Gly Val Gln Gln
85 90 95

Leu Arg Glu Ile Tyr Lys Asp Asn Arg Asn Leu Phe Asp Val Gln Glu
100 105 110

Asn Glu Pro Gln Lys Leu Val Glu Lys Val Ala Gly Asp Ile Glu Ser
115 120 125

Leu Leu Asp Arg Lys Val Gln Ala Leu Lys Arg Leu Ala Asp Ala Ala
130 135 140

Glu Asn Phe Gln Lys Ala His Arg Trp Gln Asp Asn Ile Lys Glu Glu
145 150 155 160

Asp Ile Met Tyr Tyr Asp Ala Lys Ala Asp Ala Glu Leu Asp Asp Pro
165 170 175

Glu Ser Glu Asp Met Glu Arg Gly Ser Lys Thr Ser Ala Leu Arg Leu
Page 60

18327 US Sequence Listing as filed

180

185

190

Asp Phe Ile Glu Glu Pro Asn Phe Lys Asn Lys Val Asn Tyr Ser Tyr
195 200 205

Thr Ala Val Gln Ile Pro Thr Asp Ile Tyr Lys Gly Ser Thr Val Ile
210 215 220

Leu Asn Glu Leu Asn Trp Thr Glu Ala Leu Glu Asn Val Phe Ile Glu
225 230 235 240

Asn Arg Arg Gln Asp Pro Thr Leu Leu Trp Gln Val Phe Gly Ser Ala
245 250 255

Thr Gly Val Thr Arg Tyr Tyr Pro Ala Thr Pro Trp Arg Ala Pro Lys
260 265 270

Lys Ile Asp Leu Tyr Asp Val Arg Arg Arg Pro Trp Tyr Ile Gln Gly
275 280 285

Ala Ser Ser Pro Lys Asp Met Val Ile Ile Val Asp Val Ser Gly Ser
290 295 300

Val Ser Gly Leu Thr Leu Lys Leu Met Lys Thr Ser Val Cys Glu Met
305 310 315 320

Leu Asp Thr Leu Ser Asp Asp Asp Tyr Val Asn Val Ala Ser Phe Asn
325 330 335

Glu Lys Ala Gln Pro Val Ser Cys Phe Thr His Leu Val Gln Ala Asn
340 345 350

Val Arg Asn Lys Lys Val Phe Lys Glu Ala Val Gln Gly Met Val Ala
355 360 365

Lys Gly Thr Thr Gly Tyr Lys Ala Gly Phe Glu Tyr Ala Phe Asp Gln
370 375 380

Leu Gln Asn Ser Asn Ile Thr Arg Ala Asn Cys Asn Lys Met Ile Met
385 390 395 400

Met Phe Thr Asp Gly Gly Glu Asp Arg Val Gln Asp Val Phe Glu Lys
405 410 415

Tyr Asn Trp Pro Asn Arg Thr Val Arg Val Phe Thr Phe Ser Val Gly
420 425 430

18327 US Sequence Listing as filed

Gln His Asn Tyr Asp Val Thr Pro Leu Gln Trp Met Ala Cys Thr Asn
435 440 445

Lys Gly Tyr Tyr Phe Glu Ile Pro Ser Ile Gly Ala Ile Arg Ile Asn
450 455 460

Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg Pro Met Val Leu Ala Gly
465 470 475 480

Lys Asp Ala Lys Gln Val Gln Trp Thr Asn Val Tyr Glu Asp Ala Leu
485 490 495

Gly Leu Gly Leu Val Val Thr Gly Thr Leu Pro Val Phe Asn Leu Thr
500 505 510

Gln Asp Gly Pro Gly Asp Lys Lys Asn Gln Leu Ile Leu Gly Val Met
515 520 525

Gly Ile Asp Val Ala Leu Asn Asp Ile Lys Arg Leu Thr Pro Asn Tyr
530 535 540

Thr Leu Gly Ala Asn Gly Tyr Val Phe Ala Ile Asp Leu Asn Gly Tyr
545 550 555 560

Val Leu Leu His Pro Asn Leu Lys Pro Gln Ile Thr Asn Phe Arg Glu
565 570 575

Pro Val Thr Leu Asp Phe Leu Asp Ala Glu Leu Glu Asp Glu Asn Lys
580 585 590

Glu Glu Ile Arg Arg Ser Met Ile Asp Gly Asp Lys Gly His Lys Gln
595 600 605

Ile Arg Thr Leu Val Lys Ser Leu Asp Glu Arg Tyr Ile Asp Glu Val
610 615 620

Ile Arg Asn Tyr Thr Trp Val Pro Ile Arg Ser Thr Asn Tyr Ser Leu
625 630 635 640

Gly Leu Val Leu Pro Pro Tyr Ser Thr Tyr Tyr Leu Gln Ala Asn Leu
645 650 655

Ser Asp Gln Ile Leu Gln Val Lys Leu Pro Ile Ser Lys Leu Lys Asp
660 665 670

Phe Glu Phe Leu Leu Pro Ser Ser Phe Glu Ser Glu Gly His Val Phe
675 680 685

18327 US Sequence Listing as filed

Ile Ala Pro Arg Glu Tyr Cys Lys Asp Leu Asn Ala Ser Asp Asn Asn
690 695 700

Thr Glu Phe Leu Lys Asn Phe Ile Glu Leu Met Glu Lys Val Thr Pro
705 710 715 720

Asp Ser Lys Gln Cys Asn Asn Phe Leu Leu His Asn Leu Ile Leu Asp
725 730 735

Thr Gly Ile Thr Gln Gln Leu Val Glu Arg Val Trp Arg Asp Gln Asp
740 745 750

Leu Asn Thr Tyr Ser Leu Leu Ala Val Phe Ala Ala Thr Asp Gly Gly
755 760 765

Ile Thr Arg Val Phe Pro Asn Lys Ala Ala Glu Asp Trp Thr Glu Asn
770 775 780

Pro Glu Pro Phe Asn Ala Ser Phe Tyr Arg Arg Ser Leu Asp Asn Arg
785 790 795 800

Gly Tyr Ile Phe Lys Pro Pro His Gln Asp Ser Leu Leu Arg Pro Leu
805 810 815

Glu Leu Glu Asn Asp Thr Val Gly Val Leu Val Ser Thr Ala Val Glu
820 825 830

Leu Ser Leu Gly Arg Arg Thr Leu Arg Pro Ala Val Val Gly Val Lys
835 840 845

Leu Asp Leu Glu Ala Trp Ala Glu Lys Phe Lys Val Leu Ala Ser Asn
850 855 860

Arg Thr His Gln Asp Gln Pro Gln Lys Gln Cys Gly Pro Ser Ser His
865 870 875 880

Cys Glu Met Asp Cys Glu Val Asn Asn Glu Asp Leu Leu Cys Val Leu
885 890 895

Ile Asp Asp Gly Gly Phe Leu Val Leu Ser Asn Gln Asn His Gln Trp
900 905 910

Asp Gln Val Gly Arg Phe Phe Ser Glu Val Asp Ala Asn Leu Met Leu
915 920 925

Ala Leu Tyr Asn Asn Ser Phe Tyr Thr Arg Lys Glu Ser Tyr Asp Tyr
930 935 940

18327 US Sequence Listing as filed

Gln Ala Ala Cys Ala Pro Gln Pro Pro Gly Asn Leu Gly Ala Ala Pro
 945 950 955 960

Arg Gly Val Phe Val Pro Thr Ile Ala Asp Phe Leu Asn Leu Ala Trp
 965 970 975

Trp Thr Ser Ala Ala Ala Trp Ser Leu Phe Gln Gln Leu Leu Tyr Gly
 980 985 990

Leu Ile Tyr His Ser Trp Phe Gln Ala Asp Pro Ala Glu Ala Glu Gly
 995 1000 1005

Ser Pro Glu Thr Arg Glu Ser Ser Cys Val Met Lys Gln Thr Gln
 1010 1015 1020

Tyr Tyr Phe Gly Ser Val Asn Ala Ser Tyr Asn Ala Ile Ile Asp
 1025 1030 1035

Cys Gly Asn Cys Ser Arg Leu Phe His Ala Gln Arg Leu Thr Asn
 1040 1045 1050

Thr Asn Leu Leu Phe Val Val Ala Glu Lys Pro Leu Cys Ser Gln
 1055 1060 1065

Cys Glu Val Gly Arg Leu Leu Gln Lys Glu Thr His Cys Pro Ala
 1070 1075 1080

Asp Gly Pro Glu Gln Cys Glu Leu Val Gln Arg Pro Arg Tyr Arg
 1085 1090 1095

Thr Gly Pro His Ile Cys Phe Asp Tyr Asn Ala Thr Glu Asp Thr
 1100 1105 1110

Ser Asp Cys Gly Arg Gly Ala Ser Phe Pro Pro Ser Leu Gly Val
 1115 1120 1125

Leu Val Ser Leu Gln Leu Leu Leu Leu Gly Leu Pro Pro Arg
 1130 1135 1140

Pro Gln Pro Gln Ile His Ser Phe Thr Pro Ser Arg Arg Leu
 1145 1150 1155

<210> 34
 <211> 1157
 <212> PRT
 <213> Rattus norvegicus

18327 US Sequence Listing as filed

<400> 34

Met Ala Val Pro Ala Arg Thr Cys Gly Ala Ser Trp Pro Gly Pro Val
1 5 10 15

Arg Thr Ala Arg Pro Trp Pro Gly Arg Gly Pro Arg Pro Cys Pro Asp
20 25 30

Pro Arg Gly Pro Ala Ser Gly Pro Ala Arg Pro Leu Leu Leu Leu
35 40 45

Pro Pro Leu Leu Leu Leu Pro Leu Leu Thr Ala Pro Gly Ala Ser Ala
50 55 60

Tyr Ser Phe Pro Gln Gln His Thr Met Gln His Trp Ala Arg Arg Leu
65 70 75 80

Glu Gln Glu Ile Asp Gly Val Met Arg Ile Phe Gly Gly Val Gln Gln
85 90 95

Leu Arg Glu Ile Tyr Lys Asp Asn Arg Asn Leu Phe Asp Val Gln Glu
100 105 110

Asn Glu Pro Gln Lys Leu Val Glu Lys Val Ala Gly Asp Ile Glu Ser
115 120 125

Leu Leu Asp Arg Lys Val Gln Ala Leu Lys Arg Leu Ala Asp Ala Ala
130 135 140

Glu Asn Phe Gln Lys Ala His Arg Trp Gln Asp Asn Ile Lys Glu Glu
145 150 155 160

Asp Ile Met Tyr Tyr Asp Ala Lys Ala Asp Ala Glu Leu Asp Asp Pro
165 170 175

Glu Ser Glu Asp Met Glu Arg Gly Ser Lys Thr Ser Ala Leu Arg Leu
180 185 190

Asp Phe Ile Glu Glu Pro Asn Phe Lys Asn Lys Val Asn Tyr Ser Tyr
195 200 205

Thr Ala Val Gln Ile Pro Thr Asp Ile Tyr Lys Gly Ser Thr Val Ile
210 215 220

Leu Asn Glu Leu Asn Trp Thr Glu Ala Leu Glu Asn Val Phe Ile Glu
225 230 235 240

Asn Arg Arg Gln Asp Pro Thr Leu Leu Trp Gln Val Phe Gly Ser Ala
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18327 US Sequence Listing as filed

245

250

255

Thr Gly Val Thr Arg Tyr Tyr Pro Ala Thr Pro Trp Arg Ala Pro Lys
260 265 270

Lys Ile Asp Leu Tyr Asp Val Arg Arg Arg Pro Trp Tyr Ile Gln Gly
275 280 285

Ala Ser Ser Pro Lys Asp Met Val Ile Ile Val Asp Val Ser Gly Ser
290 295 300

Val Ser Gly Leu Thr Leu Lys Leu Met Lys Thr Ser Val Cys Glu Met
305 310 315 320

Leu Asp Thr Leu Ser Asp Asp Asp Tyr Val Asn Val Ala Ser Phe Asn
325 330 335

Glu Lys Ala Gln Pro Val Ser Cys Phe Thr His Leu Val Gln Ala Asn
340 345 350

Val Arg Asn Lys Lys Val Phe Lys Glu Ala Val Gln Gly Met Val Ala
355 360 365

Lys Gly Thr Thr Gly Tyr Lys Ala Gly Phe Glu Tyr Ala Phe Asp Gln
370 375 380

Leu Gln Asn Ser Asn Ile Thr Arg Ala Asn Cys Asn Lys Met Ile Met
385 390 395 400

Met Phe Thr Asp Gly Gly Glu Asp Arg Val Gln Asp Val Phe Glu Lys
405 410 415

Tyr Asn Trp Pro Asn Arg Thr Val Arg Val Phe Thr Phe Ser Val Gly
420 425 430

Gln His Asn Tyr Asp Val Thr Pro Leu Gln Trp Met Ala Cys Thr Asn
435 440 445

Lys Gly Tyr Tyr Phe Glu Ile Pro Ser Ile Gly Ala Ile Arg Ile Asn
450 455 460

Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg Pro Met Val Leu Ala Gly
465 470 475 480

Lys Asp Ala Lys Gln Val Gln Trp Thr Asn Val Tyr Glu Asp Ala Leu
485 490 495

18327 US Sequence Listing as filed

Gly Leu Gly Leu Val Val Thr Gly Thr Leu Pro Val Phe Asn Leu Thr
500 505 510

Gln Asp Gly Pro Gly Asp Lys Lys Asn Gln Leu Ile Leu Gly Val Met
515 520 525

Gly Ile Asp Val Ala Leu Asn Asp Ile Lys Arg Leu Thr Pro Asn Tyr
530 535 540

Thr Leu Gly Ala Asn Gly Tyr Val Phe Ala Ile Asp Leu Asn Gly Tyr
545 550 555 560

Val Leu Leu His Pro Asn Leu Lys Pro Gln Ile Thr Asn Phe Arg Glu
565 570 575

Pro Val Thr Leu Asp Phe Leu Asp Ala Glu Leu Glu Asp Glu Asn Lys
580 585 590

Glu Glu Ile Arg Arg Ser Met Ile Asp Gly Asp Lys Gly His Lys Gln
595 600 605

Ile Arg Thr Leu Val Lys Ser Leu Asp Glu Arg Tyr Ile Asp Glu Val
610 615 620

Ile Arg Asn Tyr Thr Trp Val Pro Ile Arg Ser Thr Asn Tyr Ser Leu
625 630 635 640

Gly Leu Val Leu Pro Pro Tyr Ser Thr Tyr Tyr Leu Gln Ala Asn Leu
645 650 655

Ser Asp Gln Ile Leu Gln Val Lys Leu Pro Ile Ser Lys Leu Lys Asp
660 665 670

Phe Glu Phe Leu Leu Pro Ser Ser Phe Glu Ser Glu Gly His Val Phe
675 680 685

Ile Ala Pro Arg Glu Tyr Cys Lys Asp Leu Asn Ala Ser Asp Asn Asn
690 695 700

Thr Glu Phe Leu Lys Asn Phe Ile Glu Leu Met Glu Lys Val Thr Pro
705 710 715 720

Asp Ser Lys Gln Cys Asn Asn Phe Leu Leu His Asn Leu Ile Leu Asp
725 730 735

Thr Gly Ile Thr Gln Gln Leu Val Glu Arg Val Trp Arg Asp Gln Asp
740 745 750

18327 US Sequence Listing as filed

Leu Asn Thr Tyr Ser Leu Leu Ala Val Phe Ala Ala Thr Asp Gly Gly
755 760 765

Ile Thr Arg Val Phe Pro Asn Lys Ala Ala Glu Asp Trp Thr Glu Asn
770 775 780

Pro Glu Pro Phe Asn Ala Ser Phe Tyr Arg Arg Ser Leu Asp Asn Arg
785 790 795 800

Gly Tyr Ile Phe Lys Pro Pro His Gln Asp Ser Leu Leu Arg Pro Leu
805 810 815

Glu Leu Glu Asn Asp Thr Val Gly Val Leu Val Ser Thr Ala Val Glu
820 825 830

Leu Ser Leu Gly Arg Arg Thr Leu Arg Pro Ala Val Val Gly Val Lys
835 840 845

Leu Asp Leu Glu Ala Trp Ala Glu Lys Phe Lys Val Leu Ala Ser Asn
850 855 860

Arg Thr His Gln Asp Gln Pro Gln Lys Gln Cys Gly Pro Ser Ser His
865 870 875 880

Cys Glu Met Asp Cys Glu Val Asn Asn Glu Asp Leu Leu Cys Val Leu
885 890 895

Ile Asp Asp Gly Gly Phe Leu Val Leu Ser Asn Gln Asn His Gln Trp
900 905 910

Asp Gln Val Gly Arg Phe Phe Ser Glu Val Asp Ala Asn Leu Met Leu
915 920 925

Ala Leu Tyr Asn Asn Ser Phe Tyr Thr Arg Lys Glu Ser Tyr Asp Tyr
930 935 940

Gln Ala Ala Cys Ala Pro Gln Pro Pro Gly Asn Leu Gly Ala Ala Pro
945 950 955 960

Arg Gly Val Phe Val Pro Thr Ile Ala Asp Phe Leu Asn Leu Ala Trp
965 970 975

Trp Thr Ser Ala Ala Ala Trp Ser Leu Phe Gln Gln Leu Leu Tyr Gly
980 985 990

Leu Ile Tyr His Ser Trp Phe Gln Ala Asp Pro Ala Glu Ala Glu Gly
995 1000 1005

18327 US Sequence Listing as filed

Ser Pro Glu Thr Arg Glu Ser Ser Cys Val Met Lys Gln Thr Gln
1010 1015 1020

Tyr Tyr Phe Gly Ser Val Asn Ala Ser Tyr Asn Ala Ile Ile Asp
1025 1030 1035

Cys Gly Asn Cys Ser Arg Leu Phe His Ala Gln Arg Leu Thr Asn
1040 1045 1050

Thr Asn Leu Leu Phe Val Val Ala Glu Lys Pro Leu Cys Ser Gln
1055 1060 1065

Cys Glu Val Gly Arg Leu Leu Gln Lys Glu Thr His Cys Pro Ala
1070 1075 1080

Asp Gly Pro Glu Gln Cys Glu Leu Val Gln Arg Pro Arg Tyr Arg
1085 1090 1095

Thr Gly Pro His Ile Cys Phe Asp Tyr Asn Ala Thr Glu Asp Thr
1100 1105 1110

Ser Asp Cys Gly Arg Gly Ala Ser Phe Pro Pro Ser Leu Gly Val
1115 1120 1125

Leu Val Ser Leu Gln Leu Leu Leu Leu Gly Leu Pro Pro Arg
1130 1135 1140

Pro Gln Pro Gln Ile His Ser Phe Thr Pro Ser Arg Arg Leu
1145 1150 1155

<210> 35
<211> 1098
<212> PRT
<213> Mus musculus

<400> 35

Leu Leu Pro Leu Leu Thr Ala Pro Gly Ala Ser Ala Tyr Ser Phe Pro
1 5 10 15

Gln Gln His Thr Met Gln His Trp Ala Arg Arg Leu Glu Gln Glu Ile
20 25 30

Asp Gly Val Met Arg Ile Phe Gly Gly Val Gln Gln Leu Arg Glu Ile
35 40 45

Tyr Lys Asp Asn Arg Asn Leu Phe Glu Val Gln Glu Asn Glu Pro Gln
50 55 60

18327 US Sequence Listing as filed

Lys Leu Val Glu Lys Val Ala Gly Asp Ile Glu Ser Leu Leu Asp Arg
65 70 75 80

Lys Val Gln Ala Leu Lys Arg Leu Ala Asp Ala Ala Glu Asn Phe Gln
85 90 95

Lys Ala His Arg Trp Gln Asp Asn Ile Lys Glu Glu Asp Ile Met Tyr
100 105 110

Tyr Asp Ala Lys Ala Asp Ala Glu Leu Asp Asp Pro Glu Ser Glu Asp
115 120 125

Met Glu Arg Gly Ser Lys Thr Ser Ala Leu Arg Leu Asp Phe Ile Glu
130 135 140

Asp Pro Asn Phe Lys Asn Lys Val Asn Tyr Ser Tyr Thr Ala Val Gln
145 150 155 160

Ile Pro Thr Asp Ile Tyr Lys Gly Ser Thr Val Ile Leu Asn Glu Leu
165 170 175

Asn Trp Thr Glu Ala Leu Glu Asn Val Phe Ile Glu Asn Arg Arg Gln
180 185 190

Asp Pro Thr Leu Leu Trp Gln Val Phe Gly Ser Ala Thr Gly Val Thr
195 200 205

Arg Tyr Tyr Pro Ala Thr Pro Trp Arg Ala Pro Lys Lys Ile Asp Leu
210 215 220

Tyr Asp Val Arg Arg Arg Pro Trp Tyr Ile Gln Gly Ala Ser Ser Pro
225 230 235 240

Lys Asp Met Val Ile Ile Val Asp Val Ser Gly Ser Val Ser Gly Leu
245 250 255

Thr Leu Lys Leu Met Lys Thr Ser Val Cys Glu Met Leu Asp Thr Leu
260 265 270

Ser Asp Asp Asp Tyr Val Asn Val Ala Ser Phe Asn Glu Lys Ala Gln
275 280 285

Pro Val Ser Cys Phe Thr His Leu Val Gln Ala Asn Val Arg Asn Lys
290 295 300

Lys Val Phe Lys Glu Ala Val Gln Gly Met Val Ala Lys Gly Thr Thr
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305 310 315 320

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18327 US Sequence Listing as filed

Val Lys Ser Leu Asp Glu Arg Tyr Ile Asp Glu Val Ile Arg Asn Tyr
565 570 575

Thr Trp Val Pro Ile Arg Ser Thr Asn Tyr Ser Leu Gly Leu Val Leu
580 585 590

Pro Pro Tyr Ser Thr Tyr Tyr Leu Gln Ala Asn Leu Ser Asp Gln Ile
595 600 605

Leu Gln Val Lys Tyr Phe Glu Phe Leu Leu Pro Ser Ser Phe Glu Ser
610 615 620

Glu Gly His Val Phe Ile Ala Pro Arg Glu Tyr Cys Lys Asp Leu Asn
625 630 635 640

Ala Ser Asp Asn Asn Thr Glu Phe Leu Lys Asn Phe Ile Glu Leu Met
645 650 655

Glu Lys Val Thr Pro Asp Ser Lys Gln Cys Asn Asn Phe Leu Leu His
660 665 670

Asn Leu Ile Leu Asp Thr Gly Ile Thr Gln Gln Leu Val Glu Arg Val
675 680 685

Trp Arg Asp Gln Asp Leu Asn Thr Tyr Ser Leu Leu Ala Val Phe Ala
690 695 700

Ala Thr Asp Gly Gly Ile Thr Arg Val Phe Pro Asn Lys Ala Ala Glu
705 710 715 720

Asp Trp Thr Glu Asn Pro Glu Pro Phe Asn Ala Ser Phe Tyr Arg Arg
725 730 735

Ser Leu Asp Asn His Gly Tyr Ile Phe Lys Pro Pro His Gln Asp Ser
740 745 750

Leu Leu Arg Pro Leu Glu Leu Glu Asn Asp Thr Val Gly Val Leu Val
755 760 765

Ser Thr Ala Val Glu Leu Ser Leu Gly Arg Arg Thr Leu Arg Pro Ala
770 775 780

Val Val Gly Val Lys Leu Asp Leu Glu Ala Trp Ala Glu Lys Phe Lys
785 790 795 800

Val Leu Ala Ser Asn Arg Thr His Gln Asp Gln Pro Gln Lys Gln Cys
805 810 815

18327 US Sequence Listing as filed

Gly Pro Ser Ser His Cys Glu Met Asp Cys Glu Val Asn Asn Glu Asp
820 825 830

Leu Leu Cys Val Leu Ile Asp Asp Gly Gly Phe Leu Val Leu Ser Asn
835 840 845

Gln Asn His Gln Trp Asp Gln Val Gly Arg Phe Phe Ser Glu Val Asp
850 855 860

Ala Asn Leu Met Leu Ala Leu Tyr Asn Asn Ser Phe Tyr Thr Arg Lys
865 870 875 880

Glu Ser Tyr Asp Tyr Gln Ala Ala Cys Ala Pro Gln Pro Pro Gly Asn
885 890 895

Leu Gly Ala Ala Pro Arg Gly Val Phe Val Pro Thr Ile Ala Asp Phe
900 905 910

Leu Asn Leu Ala Trp Trp Thr Ser Ala Ala Ala Trp Ser Leu Phe Gln
915 920 925

Gln Leu Leu Tyr Gly Leu Ile Tyr His Ser Trp Phe Gln Ala Asp Pro
930 935 940

Ala Glu Ala Glu Gly Ser Pro Glu Thr Arg Glu Ser Ser Cys Val Met
945 950 955 960

Lys Gln Thr Gln Tyr Tyr Phe Gly Ser Val Asn Ala Ser Tyr Asn Ala
965 970 975

Ile Ile Asp Cys Gly Asn Cys Ser Arg Leu Phe His Ala Gln Arg Leu
980 985 990

Thr Asn Thr Asn Leu Leu Phe Val Val Ala Glu Lys Pro Leu Cys Ser
995 1000 1005

Gln Cys Glu Ala Gly Arg Leu Leu Gln Lys Glu Thr His Cys Pro
1010 1015 1020

Ala Asp Gly Pro Glu Gln Cys Glu Leu Val Gln Arg Pro Arg Tyr
1025 1030 1035

Arg Arg Gly Pro His Ile Cys Phe Asp Tyr Asn Ala Thr Glu Asp
1040 1045 1050

Thr Ser Asp Cys Gly Arg Gly Ala Ser Phe Pro Pro Ser Leu Gly
1055 1060 1065

18327 US Sequence Listing as filed

Val Leu Val Ser Leu Gln Leu Leu Leu Leu Gly Leu Pro Pro
1070 1075 1080

Arg Pro Gln Pro Gln Val His Ser Phe Ala Ala Ser Arg His Leu
1085 1090 1095

<210> 36
<211> 1148
<212> PRT
<213> Mus musculus

<400> 36

Met Ala Val Pro Ala Arg Thr Cys Gly Ala Ser Trp Pro Gly Pro Val
1 5 10 15

Arg Thr Ala Arg Pro Trp Pro Gly Arg Gly Pro Arg Pro Cys Pro Asp
20 25 30

Pro Arg Gly Pro Ala Ser Gly Pro Ala Arg Pro Leu Leu Leu Leu
35 40 45

Pro Pro Leu Leu Leu Leu Pro Leu Leu Thr Ala Pro Gly Ala Ser Ala
50 55 60

Tyr Ser Phe Pro Gln Gln His Thr Met Gln His Trp Ala Arg Arg Leu
65 70 75 80

Glu Gln Glu Ile Asp Gly Val Met Arg Ile Phe Gly Gly Val Gln Gln
85 90 95

Leu Arg Glu Ile Tyr Lys Asp Asn Arg Asn Leu Phe Glu Val Gln Glu
100 105 110

Asn Glu Pro Gln Lys Leu Val Glu Lys Val Ala Gly Asp Ile Glu Ser
115 120 125

Leu Leu Asp Arg Lys Val Gln Ala Leu Lys Arg Leu Ala Asp Ala Ala
130 135 140

Glu Asn Phe Gln Lys Ala His Arg Trp Gln Asp Asn Ile Lys Glu Glu
145 150 155 160

Asp Ile Met Tyr Tyr Asp Ala Lys Ala Asp Ala Glu Leu Asp Asp Pro
165 170 175

Glu Ser Glu Asp Met Glu Arg Gly Ser Lys Thr Ser Ala Leu Arg Leu
180 185 190

18327 US Sequence Listing as filed

Asp Phe Ile Glu Asp Pro Asn Phe Lys Asn Lys Val Asn Tyr Ser Tyr
195 200 205

Thr Ala Val Gln Ile Pro Thr Asp Ile Tyr Lys Gly Ser Thr Val Ile
210 215 220

Leu Asn Glu Leu Asn Trp Thr Glu Ala Leu Glu Asn Val Phe Ile Glu
225 230 235 240

Asn Arg Arg Gln Asp Pro Thr Leu Leu Trp Gln Val Phe Gly Ser Ala
245 250 255

Thr Gly Val Thr Arg Tyr Tyr Pro Ala Thr Pro Trp Arg Ala Pro Lys
260 265 270

Lys Ile Asp Leu Tyr Asp Val Arg Arg Arg Pro Trp Tyr Ile Gln Gly
275 280 285

Ala Ser Ser Pro Lys Asp Met Val Ile Ile Val Asp Val Ser Gly Ser
290 295 300

Val Ser Gly Leu Thr Leu Lys Leu Met Lys Thr Ser Val Cys Glu Met
305 310 315 320

Leu Asp Thr Leu Ser Asp Asp Asp Tyr Val Asn Val Ala Ser Phe Asn
325 330 335

Glu Lys Ala Gln Pro Val Ser Cys Phe Thr His Leu Val Gln Ala Asn
340 345 350

Val Arg Asn Lys Lys Val Phe Lys Glu Ala Val Gln Gly Met Val Ala
355 360 365

Lys Gly Thr Thr Gly Tyr Lys Ala Gly Phe Glu Tyr Ala Phe Asp Gln
370 375 380

Leu Gln Asn Ser Asn Ile Thr Arg Ala Asn Cys Asn Lys Met Ile Met
385 390 395 400

Met Phe Thr Asp Gly Gly Glu Asp Arg Val Gln Asp Val Phe Glu Lys
405 410 415

Tyr Asn Trp Pro Asn Arg Thr Val Arg Val Phe Thr Phe Ser Val Gly
420 425 430

Gln His Asn Tyr Asp Val Thr Pro Leu Gln Trp Met Ala Cys Thr Asn
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18327 US Sequence Listing as filed

435

440

445

Lys Gly Tyr Tyr Phe Glu Ile Pro Ser Ile Gly Ala Ile Arg Ile Asn
450 455 460

Thr Gln Glu Tyr Leu Asp Val Leu Gly Arg Pro Met Val Leu Ala Gly
465 470 475 480

Lys Asp Ala Lys Gln Val Gln Trp Thr Asn Val Tyr Glu Asp Ala Leu
485 490 495

Gly Leu Gly Leu Val Val Thr Gly Thr Leu Pro Val Phe Asn Leu Thr
500 505 510

Gln Asp Gly Pro Gly Glu Lys Lys Asn Gln Leu Ile Leu Gly Val Met
515 520 525

Gly Ile Asp Val Ala Leu Asn Asp Ile Lys Arg Leu Thr Pro Asn Tyr
530 535 540

Thr Leu Gly Ala Asn Gly Tyr Val Phe Ala Ile Asp Leu Asn Gly Tyr
545 550 555 560

Val Leu Leu His Pro Asn Leu Lys Pro Gln Thr Thr Asn Phe Arg Glu
565 570 575

Pro Val Thr Leu Asp Phe Leu Asp Ala Glu Leu Glu Asp Glu Asn Lys
580 585 590

Glu Glu Ile Arg Arg Ser Met Ile Asp Gly Asp Lys Gly His Lys Gln
595 600 605

Ile Arg Thr Leu Val Lys Ser Leu Asp Glu Arg Tyr Ile Asp Glu Val
610 615 620

Ile Arg Asn Tyr Thr Trp Val Pro Ile Arg Ser Thr Asn Tyr Ser Leu
625 630 635 640

Gly Leu Val Leu Pro Pro Tyr Ser Thr Tyr Tyr Leu Gln Ala Asn Leu
645 650 655

Ser Asp Gln Ile Leu Gln Val Lys Tyr Phe Glu Phe Leu Leu Pro Ser
660 665 670

Ser Phe Glu Ser Glu Gly His Val Phe Ile Ala Pro Arg Glu Tyr Cys
675 680 685

18327 US Sequence Listing as filed

Lys Asp Leu Asn Ala Ser Asp Asn Asn Thr Glu Phe Leu Lys Asn Phe
 690 695 700
 Ile Glu Leu Met Glu Lys Val Thr Pro Asp Ser Lys Gln Cys Asn Asn
 705 710 715 720
 Phe Leu Leu His Asn Leu Ile Leu Asp Thr Gly Ile Thr Gln Gln Leu
 725 730 735
 Val Glu Arg Val Trp Arg Asp Gln Asp Leu Asn Thr Tyr Ser Leu Leu
 740 745 750
 Ala Val Phe Ala Ala Thr Asp Gly Gly Ile Thr Arg Val Phe Pro Asn
 755 760 765
 Lys Ala Ala Glu Asp Trp Thr Glu Asn Pro Glu Pro Phe Asn Ala Ser
 770 775 780
 Phe Tyr Arg Arg Ser Leu Asp Asn His Gly Tyr Ile Phe Lys Pro Pro
 785 790 795 800
 His Gln Asp Ser Leu Leu Arg Pro Leu Glu Leu Glu Asn Asp Thr Val
 805 810 815
 Gly Val Leu Val Ser Thr Ala Val Glu Leu Ser Leu Gly Arg Arg Thr
 820 825 830
 Leu Arg Pro Ala Val Val Gly Val Lys Leu Asp Leu Glu Ala Trp Ala
 835 840 845
 Glu Lys Phe Lys Val Leu Ala Ser Asn Arg Thr His Gln Asp Gln Pro
 850 855 860
 Gln Lys Gln Cys Gly Pro Ser Ser His Cys Glu Met Asp Cys Glu Val
 865 870 875 880
 Asn Asn Glu Asp Leu Leu Cys Val Leu Ile Asp Asp Gly Gly Phe Leu
 885 890 895
 Val Leu Ser Asn Gln Asn His Gln Trp Asp Gln Val Gly Arg Phe Phe
 900 905 910
 Ser Glu Val Asp Ala Asn Leu Met Leu Ala Leu Tyr Asn Asn Ser Phe
 915 920 925
 Tyr Thr Arg Lys Glu Ser Tyr Asp Tyr Gln Ala Ala Cys Ala Pro Gln
 930 935 940

18327 US Sequence Listing as filed

Pro Pro Gly Asn Leu Gly Ala Ala Pro Arg Gly Val Phe Val Pro Thr
945 950 955 960

Ile Ala Asp Phe Leu Asn Leu Ala Trp Trp Thr Ser Ala Ala Ala Trp
965 970 975

Ser Leu Phe Gln Gln Leu Leu Tyr Gly Leu Ile Tyr His Ser Trp Phe
980 985 990

Gln Ala Asp Pro Ala Glu Ala Glu Gly Ser Pro Glu Thr Arg Glu Ser
995 1000 1005

Ser Cys Val Met Lys Gln Thr Gln Tyr Tyr Phe Gly Ser Val Asn
1010 1015 1020

Ala Ser Tyr Asn Ala Ile Ile Asp Cys Gly Asn Cys Ser Arg Leu
1025 1030 1035

Phe His Ala Gln Arg Leu Thr Asn Thr Asn Leu Leu Phe Val Val
1040 1045 1050

Ala Glu Lys Pro Leu Cys Ser Gln Cys Glu Ala Gly Arg Leu Leu
1055 1060 1065

Gln Lys Glu Thr His Ser Asp Gly Pro Glu Gln Cys Glu Leu Val
1070 1075 1080

Gln Arg Pro Arg Tyr Arg Arg Gly Pro His Ile Cys Phe Asp Tyr
1085 1090 1095

Asn Ala Thr Glu Asp Thr Ser Asp Cys Gly Arg Gly Ala Ser Phe
1100 1105 1110

Pro Pro Ser Leu Gly Val Leu Val Ser Leu Gln Leu Leu Leu Leu
1115 1120 1125

Leu Gly Leu Pro Pro Arg Pro Gln Pro Gln Val His Ser Phe Ala
1130 1135 1140

Ala Ser Arg His Leu
1145

<210> 37
<211> 2470
<212> DNA
<213> Mus musculus

<400> 37

18327 US Sequence Listing as filed

ctcgagaagc	ttcccaatat	ccagacctcc	gagcagggcg	cagccagctc	tatccaat	60
tcatttcaca	catcgctgcc	actggaaaat	ggatcccatc	gcccaggcaa	gccgcccagc	120
tgctctgcc	cccacgcgtg	tcgtccacta	cccagcccc	ccgcacccac	tcagaactga	180
aagcagacca	gggaggggtg	ttccaggggt	agctagagcc	tccgtcaggt	cagccggccc	240
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18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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Gln Gly Ala Ser Ser Pro Lys Asp Met Val Ile Ile Val Asp Val Ser
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Gly Ser Val Ser Gly Leu Thr Ile Lys Leu Met Lys Thr Ser Val Cys
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Glu Met Leu Asp Thr Leu Ser Asp Asp Asp Tyr Val Asn Val Ala Ser
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18327 US Sequence Listing as filed

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18327 US Sequence Listing as filed

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